# Aff disclosure---ada doubles

## 1ac

#### Same as R5

## 2ac

### Inequality adv---2ac

#### 2---growth is sustainable

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.

#### 5---Transition fails.

Buch-Hansen 18. Department of Business and Politics, Copenhagen Business School (Hubert, “The Prerequisites for a Degrowth Paradigm Shift: Insights from Critical Political Economy,” Ecological Economics Volume 146, April 2018, Pages 157-163, dml)

Political projects do not become hegemonic just because they embody good ideas. For a project to become hegemonic, (organic) intellectuals first need to develop the project and a constellation of social forces with sufficient power and resources to implement it then needs to find it appealing and struggle for it. In this context, it is worth noting that degrowth, as a social movement, has been gaining momentum for some time, not least in Southern Europe. Countless grassroots' initiatives (e.g., D'Alisa et al., 2013) are the most visible manifestations that degrowth is on the rise. Intellectuals – including founders of ecological economics such as Nicholas Georgescu-Roegen and Herman Daly, and more recently degrowth scholars such as Serge Latouche and Giorgos Kallis – have played a major role in developing and disseminating the ideas underpinning the project. A growing interest in degrowth in academia, as well as well-attended biennial international degrowth conferences, also indicate that an increasing number of people embrace such ideas. Still, the degrowth project is nowhere near enjoying the degree and type of support it needs if its policies are to be implemented through democratic processes. The number of political parties, labour unions, business associations and international organisations that have so far embraced degrowth is modest to say the least. Economic and political elites, including social democratic parties and most of the trade union movement, are united in the belief that economic growth is necessary and desirable. This consensus finds support in the prevailing type of economic theory and underpins the main contenders in the neoliberal project, such as centre-left and nationalist projects. In spite of the world's multidimensional crisis, a pro-growth discourse in other words continues to be hegemonic: it is widely considered a matter of common sense that continued economic growth is required. It is also noteworthy that economic and political elites, to a large extent, continue to support the neoliberal project, even in the face of its evident shortcomings. Indeed, the 2008 financial crisis did not result in the weakening of transnational financial capital that could have paved the way for a paradigm shift. Instead of coming to an end, neoliberal capitalism has arguably entered a more authoritarian phase (Bruff, 2014). The main reason the power of the pre-crisis coalition remains intact is that governments stepped in and saved the dominant fraction by means of massive bailouts. It is a foregone conclusion that this fraction and the wider coalition behind the neoliberal paradigm (transnational industrial capital, the middle classes and segments of organized labour) will consider the degrowth paradigm unattractive and that such social forces will vehemently oppose the implementation of degrowth policies (see also Rees, 2014: 97). While degrowth advocates envision a future in which market forces play a less prominent role than they do today, degrowth is not an anti-market project. As such, it can attract support from certain types of market actors. In particular, it is worth noting that social enterprises, such as cooperatives (Restakis, 2010), play a major role in the degrowth vision. Such enterprises are defined by being ‘organisations involved at least to some extent in the market, with a clear social, cultural and/or environmental purpose, rooted in and serving primarily the local community and ideally having a local and/or democratic ownership structure’ (Johanisova et al., 2013: 11). Social enterprises currently exist at the margins of a system, in which the dominant type of business entity is profit-oriented, shareholder-owned corporations. The further dissemination of social enterprises, which is crucial to the transitions to degrowth societies, is – in many cases – blocked or delayed as a result of the centrifugal forces of global competition (Wigger and Buch-Hansen, 2013). Overall, social enterprises thus (still) constitute a social force with modest power. Ougaard (2016: 467) notes that one of the major dividing lines in the contemporary transnational capitalist class is between capitalists who have a material interest in the carbon-based economy and capitalists who have a material interest in decarbonisation. The latter group, for instance, includes manufacturers of equipment for the production of renewable energy (ibid.: 467). As mentioned above, degrowth advocates have singled out renewable energy as one of the sectors that needs to grow in the future. As such, it seems likely that the owners of national and transnational companies operating in this sector would be more positively inclined towards the degrowth project than would capitalists with a stake in the carbon-based economy. Still, the prospect of the “green sector” emerging as a driving force behind degrowth currently appears meagre. Being under the control of transnational capital (Harris, 2010), such companies generally embrace the “green growth” discourse, which ‘is deeply embedded in neoliberal capitalism’ and indeed serves to adjust this form of capitalism ‘to crises arising from contradictions within itself’ (Wanner, 2015: 23). In addition to support from the social forces engendered by the production process, a political project ‘also needs the political ability to mobilize majorities in parliamentary democracies, and a sufficient measure of at least passive consent’ (van Apeldoorn and Overbeek, 2012: 5–6) if it is to become hegemonic. As mentioned, degrowth enjoys little support in parliaments, and certainly the pro-growth discourse is hegemonic among parties in government.5 With capital accumulation being the most important driving force in capitalist societies, political decision-makers are generally eager to create conditions conducive to production and the accumulation of capital (Lindblom, 1977: 172). Capitalist states and international organisations are thus “programmed” to facilitate capital accumulation, and do as such constitute a strategically selective terrain that works to the disadvantage of the degrowth project.

#### 6---only growth sustains colonization and solves inevitable extinction.

**Skran 16** [Dale Skran is Executive Vice President of the National Space Society and a member of the Board of Directors of the Alliance for Space Development. “Settling space is the only sustainable reason for humans to be in space,” <http://www.thespacereview.com/article/2915/1>]

As robotic and artificial intelligence technologies improve and enable increasingly robust exploration without a human presence, eventually there will be only one sustainable reason for humans to be in space: settlement. Research into the recycling technology required for long-term off-Earth settlements will directly benefit terrestrial sustainability. Actively working toward developing and settling space will make available mineral and energy resources for use on Earth on a vast scale. Finally, space settlement offers the hope of long-term species survival that remaining on Earth does not. There are more than seven billion people on the Earth today. No rational space settlement advocate suggests that any significant portion of that population, or even of those who are rich, will be moving to Mars or anywhere else in space. However, a recent essay by Astro Teller, head of Google X Labs, and his wife Danielle, a physician and researcher takes the bold position that “It’s completely ridiculous to think that humans could live on Mars.” This essay, published by Quartz, repeats with little examination some of the hoariest arguments against space settlement. To support this view, the Tellers quote their 12-year-old daughter: “I can’t stand that people think we’re all going to live on Mars after we destroy our own planet.” This quote contains two mischaracterizations that demand refutation: that “we are all” going to live in space and that we are going to live in space after we destroy Earth. Another canard that has long floated about was given form by the recent film Elysium starring Matt Damon: the rich will leave the poor on the Earth and escape to space settlements. Upon examination, all three of these ideas are strawmen. There are more than seven billion people on the Earth today. No rational space settlement advocate suggests that any significant portion of that population, or even of those who are rich, will be moving to Mars or anywhere else in space. Instead, we expect that relatively small numbers of highly qualified individuals, or those who are deeply dedicated to living in space, would form the first settlements. Over a significant period of time, thousands more from the Earth would join those settlements as they become increasingly self-sufficient. Over more time, various possible niches for settlement (Moon, Mars, asteroids, free space, etc.) will be occupied, and eventually the population in space will total many millions, most of whom will have been born in space. So why then do Elon Musk, Stephen Hawking, and many others, including organizations like the National Space Society (NSS) and Alliance for Space Development, believe strongly that space settlement is essential to human survival? Although this may seem surprising, the Earth is not a “safe space.” The destiny of virtually all species on Earth is extinction in a relatively short span of geologic time. The Tellers claim that “we live on a planet that is perfect for us.” This statement is both completely true and total nonsense. We fit well on the Earth because we have evolved over millions of years to become creatures that are both adapted to live here and to like living here. It is truer to say that we are perfect for the Earth than the reverse. In fact, the Earth is not such a commodious place. It is subject to periodic calamities of various sorts, ranging from massive asteroid and comet impacts to titanic volcanic eruptions, and from periodic ice ages to disastrous solar flares. In the short run, the Earth seems balmy and comfortable. Viewed from the perspective of deep time, it starts to look more like a death trap, bedeviled by regular mass extinctions. However, things are actually quite a bit worse. Although there are many potentially bad things that might happen to the human race on the Earth from natural sources, there are many more from unnatural sources. We have been dancing with nuclear disaster for a long time. An apocalyptic atomic war is not inevitable, but it is possible. Add to this scenario the genetically engineered killer virus, “gray goo,” a robot revolt, and other horrors as yet undreamt, and the odds against human survival get longer. Hence, the need to abandon the fiction of Earth as our eternal and unchanging perfect home and to appreciate both the need for, and promise of, space settlement. Not so the rich can escape to an Elysium in the sky, or so we can all leave behind a polluted and overheated Earth, but simply so that the human species and human culture has a chance at surviving and flourishing in the long term. The Tellers believe that sustainability on the Earth has no relationship to what we do in space, but the same technologies that enable deep space settlement will have a profound impact on terrestrial sustainability. The Tellers write, “We haven’t even colonized the Sahara desert, the bottom of the oceans… because it makes no economic sense.” This may be true, but it also makes no sense to settle the Sahara desert, the bottom of the oceans, or Antarctica since these locations are on the Earth, and humans living there will not increase the probability of species survival. Near-Earth free space settlements and lunar bases are just stepping stones to ones much further out that are quarantined from Earth by millions of kilometers of vacuum. Once the motivation of species survival is put front and center, it becomes clear that a settlement in low Earth orbit, on the Moon, at L5, or on the Martian surface is not nearly sufficient. What is needed is a large set of thriving communities distributed throughout the solar system, and even ultimately in the Oort Cloud surrounding the solar system proper. This vision is not a small thing. It will be the work of many generations, just as was the settling of the New World or, even earlier in history, the human diaspora out of Africa along the Asian coast to Australia and beyond. The Tellers believe that sustainability on the Earth has no relationship to what we do in space, but the same technologies that enable deep space settlement will have a profound impact on terrestrial sustainability. Space settlements, of necessity, push the limits of food production per square meter and per liter of water. Space settlement agricultural methods can also be applied to growing food in parched California or in vertical farms in crowded urban areas. Space settlements require humans and technology to co-exist in close proximity. This implies an absolute minimization of pollution and sustained recycling of all waste. Such technologies seem highly applicable to sustainability on Earth as well. We will need to provide the best possible medical care for remote space settlements, which will be far from hospitals on Earth. The technologies that make such medicine effective—“tricorders”, telemedicine, and so on—can also bring medical care to underdeveloped and underserved areas of the Earth. The Tellers raise the specter of “winter-over syndrome” in the Antarctic, writing that “living on Mars would be way, way more miserable than living in Antarctica,” and concluding, “Nobody wants to live there.” Although it is clear that the Tellers will not be going, the large numbers who signed up for Mars One’s sketchy settlement plans suggest that a lot of people do want to live on Mars. There are real challenges to constructing space settlements, but current Antarctic bases are not true settlements. Nobody lives there with their families, with the exception of the coastal Esperanza Base, where about ten families routinely winter over. No real effort is made to create any kind of human environment that is comfortable over a long period of time. Conditions in Antarctica might be better compared to living in a campground than a self-sustaining settlement. Additionally, the current Antarctic Treaty essentially prevents any extraction or use of the natural resources found there, thus making economically independent settlements infeasible. The Tellers think that, from an economic perspective, “Mars has nothing to offer in return.” Here, at least in the short run, they have a point. Let us not shy from the truth. Conditions in the early settlements in the New World were difficult at best, and the casualty rate was high. We should expect the same to hold true for early space settlements. However, Jamestown and Plymouth gave rise to vast cities and a tamed landscape on a scale of hundreds of years. We now bring to the table technological means that would seem magical to the Jamestown settlers. Even as difficult an environment as the Moon can be developed and settled using technology that either exists currently or is an engineering project, as one book suggests. The Tellers think that, from an economic perspective, “Mars has nothing to offer in return.” Here, at least in the short run, they have a point. Although Mars may have more of the natural resources a settlement will need than, say, the Moon, it is at the bottom of a fairly steep gravity well and, for the time being, it is not likely that there will be many Mars-to-Earth exports. However, this is like looking at the resources of the New World via a keyhole, seeing a swamp, and reporting back that there is no point in going there. It is worth keeping in mind the example of “Seward’s Folly.” The purchase of Alaska from Russia was mocked as “Seward’s icebox” and a “polar bear garden.” At the time, the oil and mineral riches of Alaska were undiscovered and undreamt of. Space itself teems with valuable resources, including continuous and abundant solar energy and mineral wealth on a scale beyond imagination just in the near Earth asteroids. Just as the Tellers were dismissing space resources as irrelevant, the US Congress was laying the legal groundwork for asteroid and lunar mining with the passage of the Commercial Space Launch Competitiveness Act, signed by President Obama on November 23, 2015. The Tellers also seem unaware that their leadership at Google, Larry Page and Eric Schmidt, are investors in the asteroid mining firm Planetary Resources. The Tellers say that “we won’t survive [on Earth] unless we learn to live in a resource neutral way.” This statement assumes that that Earth is a closed system, which it is not. The Earth is flooded daily with vast amounts of solar energy that, if exploited, could power just about any civilization we wish to maintain. There is no technical limitation to providing continuous, carbon-free power from space solar power satellites beaming power back to the surface of the Earth anywhere it might be needed. The main opposition to this idea derives from an unwillingness to consider centralized power systems on ideological grounds, combined with the unexpected reality of very cheap natural gas today. Even the most conservative consideration of near-Earth asteroid resources suggests that there is no reason to view the Earth as a closed system to which nothing can be added. The time for the settlement of Mars will come, but first we need to build on our success in developing the resources of Earth orbit, in the form of navigation, Earth observation, communication, and weather satellites, by fully developing the economic potential of the Earth-Moon system. Space settlements must flow out of the development of the economic resources of space if they are to be sustainable in the long term. The NSS has developed a complete description of milestones toward the development of space settlements. In view of the above, Astro Teller was probably right to turn down the “space cadet” who wanted Google X to spend money on Mars settlement. But wait—Google is doing exactly that. A key first step toward space settlement is ensuring a gapless transition from the existing International Space Station to commercially owned and operated LEO space stations as described in the NSS position paper “Next Generation Space Stations.” Next will come the development of the resources of the Moon and neaby asteroids leading to the creation of a self-sustaining Earth-Moon economy. Once we have established an asteroid-Earth-Moon economy that makes the resources found in this region fully available for projects ranging from the construction of solar power satellites to fueling future Mars missions, trips to Mars will be far less of a reach than they are today. In view of the above, Astro Teller was probably right to turn down the “space cadet” who wanted Google X to spend money on Mars settlement. Currently Google’s money would be better spent in low Earth orbit, among the asteroids, and on the Moon, joining forces with the growing number of entrepreneurs seeking their fortunes in space. But wait—Google is doing exactly that by sponsoring the Google Lunar X PRIZE to encourage private groups to send landers to the Moon, and investing $900 million in Elon Musk’s SpaceX. Given that corporate Google (now Alphabet) has just made a massive investment in a company founded to settle Mars, the Tellers’ essay sounds a bit like sour grapes. In any case, the Tellers are completely wrong in their disregard of the potential economic benefits of space development and the underlying motivation for space settlement.

#### 8---No environment impact.

Kareiva 18. Peter Kareiva & Valerie Carranza. Institute of the Environment and Sustainability, University of California, Los Angeles. 01/2018. “Existential Risk Due to Ecosystem Collapse: Nature Strikes Back.” Futures. CrossRef, doi:10.1016/j.futures.2018.01.001.

The interesting question is whether any of the planetary thresholds other than CO2 could also portend existential risks. Here the answer is not clear. One boundary often mentioned as a concern for the fate of global civilization is biodiversity (Ehrlich & Ehrlich, 2012), with the proposed safety threshold being a loss of greater than .001% per year (Rockström et al., 2009). There is little evidence that this particular .001% annual loss is a threshold—and it is hard to imagine any data that would allow one to identify where the threshold was (Brook et al., 2013; Lenton & Williams, 2013). A better question is whether one can imagine any scenario by which the loss of too many species leads to the collapse of societies and environmental disasters, even though one cannot know the absolute number of extinctions that would be required to create this dystopia. While there are data that relate local reductions in species richness to altered ecosystem function, these results do not point to substantial existential risks. The data are small-scale experiments in which plant productivity, or nutrient retention is reduced as species number declines locally (Vellend, 2017), or are local observations of increased variability in fisheries yield when stock diversity is lost (Schindler et al., 2010). Those are not existential risks. To make the link even more tenuous, there is little evidence that biodiversity is even declining at local scales (Vellend et al 2017; Vellend et al., 2013). Total planetary biodiversity may be in decline, but local and regional biodiversity is often staying the same because species from elsewhere replace local losses, albeit homogenizing the world in the process. Although the majority of conservation scientists are likely to flinch at this conclusion, there is growing skepticism regarding the strength of evidence linking trends in biodiversity loss to an existential risk for humans (Maier, 2012; Vellend, 2014). Obviously if all biodiversity disappeared civilization would end—but no one is forecasting the loss of all species. It seems plausible that the loss of 90% of the world’s species could also be apocalyptic, but not one is predicting that degree of biodiversity loss either. Tragic, but plausible is the possibility our planet suffering a loss of as many as half of its species. If global biodiversity were halved, but at the same time locally the number of species stayed relatively stable, what would be the mechanism for an end-of-civilization or even end of human prosperity scenario? Extinctions and biodiversity loss are ethical and spiritual losses, but perhaps not an existential risk. What about the remaining eight planetary boundaries? Stratospheric ozone depletion is one—but thanks to the Montreal Protocol ozone depletion is being reversed (Hand, 2016). Disruptions of the nitrogen cycle and of the phosphorous cycle have also been proposed as representing potential planetary boundaries (one boundary for nitrogen and one boundary for phosphorous). There are compelling data linking excesses in these nutrients to environmental damage. For example, over-application of fertilizer in Midwestern USA has led to dead zones in the Gulf of Mexico. Similarly, excessive nitrogen has polluted groundwater in California to such an extent that it is unsuitable for drinking and some rural communities are forced to drink bottled water. However, these impacts are local. At the same time that there is too much N loading in the US, there is a need for more N in Africa as a way of increasing agricultural yields (Mueller et al., 2012). While the disruption of nitrogen and phosphorous cycles clearly perturb local ecosystems, end-of-the-world scenarios seem a bit far-fetched. Another hypothesized planetary boundary entails the conversion of natural habitats to agricultural land. The mechanism by which too much agricultural land could cause a crisis is unclear—unless it is because land conversion causes so much biodiversity loss that is species extinctions that are the proximate cause of an eco-catastrophe. Excessive chemical pollution and excessive atmospheric aerosol loading have each been suggested as planetary boundaries as well. In the case of these pollution boundaries, there are well-documented mechanisms by which surpassing some concentration of a pollutant inflicts severe human health hazards. There is abundant evidence linking chemical and aerosol pollution to higher mortality and lower reproductive success in humans, which in turn could cause a major die-off. It is perhaps appropriate then that when Hollywood envisions an unlivable world, it often invokes a story of humans poisoning themselves. That said, it is doubtful that we will poison ourselves towards extinction. Data show that as nations develop and increase their wealth, they tend to clean up their air and water and reduce environmental pollution (Flörke et al., 2013; Hao & Wang, 2005). In addition, as economies become more circular (see Mathews & Tan, 2016), environmental damage due to waste products is likely to decline. The key point is that the pollutants associated with the planetary boundaries are so widely recognized, and the consequences of local toxic events are so immediate, that it is reasonable to expect national governments to act before we suffer a planetary ecocatastrophe.

#### Walt goes Aff

\*FULL ARTICLE---NO TEXT REMOVED\*

Walt 20. Stephen M. Walt, Professor of IR @ Harvard & PhD in Poli Sci from UC Berkeley, (5-13-2020, "Will a Global Depression Trigger Another World War?," *Foreign Policy*, <https://foreignpolicy.com/2020/05/13/coronavirus-pandemic-depression-economy-world-war/>, pacc)

By many measures, 2020 is looking to be the worst year that humankind has faced in many decades. We’re in the midst of a pandemic that has already claimed more than 280,000 lives, sickened millions of people, and is certain to afflict millions more before it ends. The world economy is in free fall, with unemployment rising dramatically, trade and output plummeting, and no hopeful end in sight. A plague of locusts is back for a second time in Africa, and last week we learned about murderous killer wasps threatening the bee population in the United States. Americans have a head-in-the-sand president who prescribes potentially lethal nostrums and ignores the advice of his scientific advisors. Even if all those things magically disappeared tomorrow—and they won’t—we still face the looming long-term danger from climate change. Given all that, what could possibly make things worse? Here’s one possibility: war. It is therefore worth asking whether the combination of a pandemic and a major economic depression is making war more or less likely. What does history and theory tell us about that question? For starters, we know neither plague nor depression make war impossible. World War I ended just as the 1918-1919 influenza was beginning to devastate the world, but that pandemic didn’t stop the Russian Civil War, the Russo-Polish War, or several other serious conflicts. The Great Depression that began in 1929 didn’t prevent Japan from invading Manchuria in 1931, and it helped fuel the rise of fascism in the 1930s and made World War II more likely. So if you think major war simply can’t happen during COVID-19 and the accompanying global recession, think again. But war could still be much less likely. The Massachusetts Institute of Technology’s Barry Posen has already considered the likely impact of the current pandemic on the probability of war, and he believes COVID-19 is more likely to promote peace instead. He argues that the current pandemic is affecting all the major powers adversely, which means it isn’t creating tempting windows of opportunity for unaffected states while leaving others weaker and therefore vulnerable. Instead, it is making all governments more pessimistic about their short- to medium-term prospects. Because states often go to war out of sense of overconfidence (however misplaced it sometimes turns out to be), pandemic-induced pessimism should be conducive to peace. Moreover, by its very nature war requires states to assemble lots of people in close proximity—at training camps, military bases, mobilization areas, ships at sea, etc.—and that’s not something you want to do in the middle of a pandemic. For the moment at least, beleaguered governments of all types are focusing on convincing their citizens they are doing everything in their power to protect the public from the disease. Taken together, these considerations might explain why even an impulsive and headstrong warmaker like Saudi Arabia’s Mohammed bin Salman has gotten more interested in winding down his brutal and unsuccessful military campaign in Yemen. Posen adds that COVID-19 is also likely to reduce international trade in the short to medium term. Those who believe economic interdependence is a powerful barrier to war might be alarmed by this development, but he points out that trade issues have been a source of considerable friction in recent years—especially between the United States and China—and a degree of decoupling might reduce tensions somewhat and cause the odds of war to recede. For these reasons, the pandemic itself may be conducive to peace. But what about the relationship between broader economic conditions and the likelihood of war? Might a few leaders still convince themselves that provoking a crisis and going to war could still advance either long-term national interests or their own political fortunes? Are the other paths by which a deep and sustained economic downturn might make serious global conflict more likely? One familiar argument is the so-called diversionary (or “scapegoat”) theory of war. It suggests that leaders who are worried about their popularity at home will try to divert attention from their failures by provoking a crisis with a foreign power and maybe even using force against it. Drawing on this logic, some Americans now worry that President Donald Trump will decide to attack a country like Iran or Venezuela in the run-up to the presidential election and especially if he thinks he’s likely to lose. This outcome strikes me as unlikely, even if one ignores the logical and empirical flaws in the theory itself. War is always a gamble, and should things go badly—even a little bit—it would hammer the last nail in the coffin of Trump’s declining fortunes. Moreover, none of the countries Trump might consider going after pose an imminent threat to U.S. security, and even his staunchest supporters may wonder why he is wasting time and money going after Iran or Venezuela at a moment when thousands of Americans are dying preventable deaths at home. Even a successful military action won’t put Americans back to work, create the sort of testing-and-tracing regime that competent governments around the world have been able to implement already, or hasten the development of a vaccine. The same logic is likely to guide the decisions of other world leaders too. Another familiar folk theory is “military Keynesianism.” War generates a lot of economic demand, and it can sometimes lift depressed economies out of the doldrums and back toward prosperity and full employment. The obvious case in point here is World War II, which did help the U.S economy finally escape the quicksand of the Great Depression. Those who are convinced that great powers go to war primarily to keep Big Business (or the arms industry) happy are naturally drawn to this sort of argument, and they might worry that governments looking at bleak economic forecasts will try to restart their economies through some sort of military adventure. I doubt it. It takes a really big war to generate a significant stimulus, and it is hard to imagine any country launching a large-scale war—with all its attendant risks—at a moment when debt levels are already soaring. More importantly, there are lots of easier and more direct ways to stimulate the economy—infrastructure spending, unemployment insurance, even “helicopter payments”—and launching a war has to be one of the least efficient methods available. The threat of war usually spooks investors too, which any politician with their eye on the stock market would be loath to do. Economic downturns can encourage war in some special circumstances, especially when a war would enable a country facing severe hardships to capture something of immediate and significant value. Saddam Hussein’s decision to seize Kuwait in 1990 fits this model perfectly: The Iraqi economy was in terrible shape after its long war with Iran; unemployment was threatening Saddam’s domestic position; Kuwait’s vast oil riches were a considerable prize; and seizing the lightly armed emirate was exceedingly easy to do. Iraq also owed Kuwait a lot of money, and a hostile takeover by Baghdad would wipe those debts off the books overnight. In this case, Iraq’s parlous economic condition clearly made war more likely. Yet I cannot think of any country in similar circumstances today. Now is hardly the time for Russia to try to grab more of Ukraine—if it even wanted to—or for China to make a play for Taiwan, because the costs of doing so would clearly outweigh the economic benefits. Even conquering an oil-rich country—the sort of greedy acquisitiveness that Trump occasionally hints at—doesn’t look attractive when there’s a vast glut on the market. I might be worried if some weak and defenseless country somehow came to possess the entire global stock of a successful coronavirus vaccine, but that scenario is not even remotely possible. If one takes a longer-term perspective, however, a sustained economic depression could make war more likely by strengthening fascist or xenophobic political movements, fueling protectionism and hypernationalism, and making it more difficult for countries to reach mutually acceptable bargains with each other. The history of the 1930s shows where such trends can lead, although the economic effects of the Depression are hardly the only reason world politics took such a deadly turn in the 1930s. Nationalism, xenophobia, and authoritarian rule were making a comeback well before COVID-19 struck, but the economic misery now occurring in every corner of the world could intensify these trends and leave us in a more war-prone condition when fear of the virus has diminished. On balance, however, I do not think that even the extraordinary economic conditions we are witnessing today are going to have much impact on the likelihood of war. Why? First of all, if depressions were a powerful cause of war, there would be a lot more of the latter. To take one example, the United States has suffered 40 or more recessions since the country was founded, yet it has fought perhaps 20 interstate wars, most of them unrelated to the state of the economy. To paraphrase the economist Paul Samuelson’s famous quip about the stock market, if recessions were a powerful cause of war, they would have predicted “nine out of the last five (or fewer).” Second, states do not start wars unless they believe they will win a quick and relatively cheap victory. As John Mearsheimer showed in his classic book Conventional Deterrence, national leaders avoid war when they are convinced it will be long, bloody, costly, and uncertain. To choose war, political leaders have to convince themselves they can either win a quick, cheap, and decisive victory or achieve some limited objective at low cost. Europe went to war in 1914 with each side believing it would win a rapid and easy victory, and Nazi Germany developed the strategy of blitzkrieg in order to subdue its foes as quickly and cheaply as possible. Iraq attacked Iran in 1980 because Saddam believed the Islamic Republic was in disarray and would be easy to defeat, and George W. Bush invaded Iraq in 2003 convinced the war would be short, successful, and pay for itself. The fact that each of these leaders miscalculated badly does not alter the main point: No matter what a country’s economic condition might be, its leaders will not go to war unless they think they can do so quickly, cheaply, and with a reasonable probability of success. Third, and most important, the primary motivation for most wars is the desire for security, not economic gain. For this reason, the odds of war increase when states believe the long-term balance of power may be shifting against them, when they are convinced that adversaries are unalterably hostile and cannot be accommodated, and when they are confident they can reverse the unfavorable trends and establish a secure position if they act now. The historian A.J.P. Taylor once observed that “every war between Great Powers [between 1848 and 1918] … started as a preventive war, not as a war of conquest,” and that remains true of most wars fought since then. The bottom line: Economic conditions (i.e., a depression) may affect the broader political environment in which decisions for war or peace are made, but they are only one factor among many and rarely the most significant. Even if the COVID-19 pandemic has large, lasting, and negative effects on the world economy—as seems quite likely—it is not likely to affect the probability of war very much, especially in the short term. To be sure, I can’t rule out another powerful cause of war—stupidity—especially when it is so much in evidence in some quarters these days. So there is no guarantee that we won’t see misguided leaders stumbling into another foolish bloodletting. But given that it’s hard to find any rays of sunshine at this particular moment in history, I’m going to hope I’m right about this one.

#### No bioterrorism – no motive or technical ability.

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Bioterrorism seems to be back in fashion. In the past, it has received bursts of attention that arose from particular incidents—the “anthrax letters” sent through the mail to US politicians and media outlets in 2001, for instance, or the purchase of plague bacteria by white supremacist Larry Wayne Harris in 1995. This time, it’s an unlikely individual calling attention to the bioterror threat—Bill Gates, the Microsoft founder turned philanthropist. Over the last several years, the world’s richest man has spent vast sums of money on global health, and in the last few months he has turned his attention to bioterrorism. At a high-profile security summit in Munich in February, he warned that bioterrorism could kill tens of millions. At a London security meeting a couple of months later, he said terrorists could wipe out 30 million people by weaponizing a disease such as smallpox.

I disagree. At a stretch, terrorists taking advantage of advances in biology might be able to create a viable pathogen. That does not mean they could create a sophisticated biological weapon, and certainly not a weapon that could kill 30 million people. Terrorists in any event tend to be conservative. They use readily available weapons that have a proven track record—not unconventional weapons that are more difficult to develop and deploy. Available evidence shows that few terrorists have ever even contemplated using biological agents, and the extremely small number of bioterrorism incidents in the historical record shows that biological agents are difficult to use as weapons. The skills required to undertake even the most basic of bioterrorism attacks are more demanding than often assumed. These technical barriers are likely to persist in the near- and medium-term future.

#### Evil AI is impossible

Pinker 18 (Stephen, professor of psychology at Harvard, “Enlightenment Now: The Case for Reason, Science, Humanism, and Progress, EM)

Prominent among the existential risks that supposedly threaten the future of humanity is a 21st-century version of the Y2K bug. This is the danger that we will be subjugated, intentionally or accidentally, by artificial intelligence (AI), a disaster sometimes called the Robopocalypse and commonly illustrated with stills from the Terminator movies. As with Y2K, some smart people take it seriously. Elon Musk, whose company makes artificially intelligent self-driving cars, called the technology “more dangerous than nukes.” Stephen Hawking, speaking through his artificially intelligent synthesizer, warned that it could “spell the end of the human race.”19 But among the smart people who aren’t losing sleep are most experts in artificial intelligence and most experts in human intelligence. The Robopocalypse is based on a muzzy conception of intelligence that owes more to the Great Chain of Being and a Nietzschean will to power than to a modern scientific understanding.21 In this conception, intelligence is an all-powerful, wish-granting potion that agents possess in different amounts. Humans have more of it than animals, and an artificially intelligent computer or robot of the future (“an AI,” in the new count-noun usage) will have more of it than humans. Since we humans have used our moderate endowment to domesticate or exterminate less well-endowed animals (and since technologically advanced societies have enslaved or annihilated technologically primitive ones), it follows that a supersmart AI would do the same to us. Since an AI will think millions of times faster than we do, and use its superintelligence to recursively improve its superintelligence (a scenario sometimes called “foom,” after the comic-book sound effect), from the instant it is turned on we will be powerless to stop it.22 But the scenario makes about as much sense as the worry that since jet planes have surpassed the flying ability of eagles, someday they will swoop out of the sky and seize our cattle. The first fallacy is a confusion of intelligence with motivation—of beliefs with desires, inferences with goals, thinking with wanting. Even if we did invent superhumanly intelligent robots, why would they want to enslave their masters or take over the world? Intelligence is the ability to deploy novel means to attain a goal. But the goals are extraneous to the intelligence: being smart is not the same as wanting something. It just so happens that the intelligence in one system, Homo sapiens, is a product of Darwinian natural selection, an inherently competitive process. In the brains of that species, reasoning comes bundled (to varying degrees in different specimens) with goals such as dominating rivals and amassing resources. But it’s a mistake to confuse a circuit in the limbic brain of a certain species of primate with the very nature of intelligence. An artificially intelligent system that was designed rather than evolved could just as easily think like shmoos, the blobby altruists in Al Capp’s comic strip Li’l Abner, who deploy their considerable ingenuity to barbecue themselves for the benefit of human eaters. There is no law of complex systems that says that intelligent agents must turn into ruthless conquistadors. Indeed, we know of one highly advanced form of intelligence that evolved without this defect. They’re called women. The second fallacy is to think of intelligence as a boundless continuum of potency, a miraculous elixir with the power to solve any problem, attain any goal.23 The fallacy leads to nonsensical questions like when an AI will “exceed human-level intelligence,” and to the image of an ultimate “Artificial General Intelligence” (AGI) with God-like omniscience and omnipotence. Intelligence is a contraption of gadgets: software modules that acquire, or are programmed with, knowledge of how to pursue various goals in various domains.24 People are equipped to find food, win friends and influence people, charm prospective mates, bring up children, move around in the world, and pursue other human obsessions and pastimes. Computers may be programmed to take on some of these problems (like recognizing faces), not to bother with others (like charming mates), and to take on still other problems that humans can’t solve (like simulating the climate or sorting millions of accounting records). The problems are different, and the kinds of knowledge needed to solve them are different. Unlike Laplace’s demon, the mythical being that knows the location and momentum of every particle in the universe and feeds them into equations for physical laws to calculate the state of everything at any time in the future, a real-life knower has to acquire information about the messy world of objects and people by engaging with it one domain at a time. Understanding does not obey Moore’s Law: knowledge is acquired by formulating explanations and testing them against reality, not by running an algorithm faster and faster.25 Devouring the information on the Internet will not confer omniscience either: big data is still finite data, and the universe of knowledge is infinite. For these reasons, many AI researchers are annoyed by the latest round of hype (the perennial bane of AI) which has misled observers into thinking that Artificial General Intelligence is just around the corner.26 As far as I know, there are no projects to build an AGI, not just because it would be commercially dubious but because the concept is barely coherent. The 2010s have, to be sure, brought us systems that can drive cars, caption photographs, recognize speech, and beat humans at Jeopardy!, Go, and Atari computer games. But the advances have not come from a better understanding of the workings of intelligence but from the brute-force power of faster chips and bigger data, which allow the programs to be trained on millions of examples and generalize to similar new ones. Each system is an idiot savant, with little ability to leap to problems it was not set up to solve, and a brittle mastery of those it was. A photo-captioning program labels an impending plane crash “An airplane is parked on the tarmac”; a game-playing program is flummoxed by the slightest change in the scoring rules.27 Though the programs will surely get better, there are no signs of foom. Nor have any of these programs made a move toward taking over the lab or enslaving their programmers. Even if an AGI tried to exercise a will to power, without the cooperation of humans it would remain an impotent brain in a vat. The computer scientist Ramez Naam deflates the bubbles surrounding foom, a technological Singularity, and exponential self-improvement: Imagine that you are a superintelligent AI running on some sort of microprocessor (or perhaps, millions of such microprocessors). In an instant, you come up with a design for an even faster, more powerful microprocessor you can run on. Now . . . drat! You have to actually manufacture those microprocessors. And those fabs [fabrication plants] take tremendous energy, they take the input of materials imported from all around the world, they take highly controlled internal environments which require airlocks, filters, and all sorts of specialized equipment to maintain, and so on. All of this takes time and energy to acquire, transport, integrate, build housing for, build power plants for, test, and manufacture. The real world has gotten in the way of your upward spiral of self-transcendence.28 The real world gets in the way of many digital apocalypses. When HAL gets uppity, Dave disables it with a screwdriver, leaving it pathetically singing “A Bicycle Built for Two” to itself. Of course, one can always imagine a Doomsday Computer that is malevolent, universally empowered, always on, and tamperproof. The way to deal with this threat is straightforward: don’t build one. As the prospect of evil robots started to seem too kitschy to take seriously, a new digital apocalypse was spotted by the existential guardians. This storyline is based not on Frankenstein or the Golem but on the Genie granting us three wishes, the third of which is needed to undo the first two, and on King Midas ruing his ability to turn everything he touched into gold, including his food and his family. The danger, sometimes called the Value Alignment Problem, is that we might give an AI a goal and then helplessly stand by as it relentlessly and literal-mindedly implemented its interpretation of that goal, the rest of our interests be damned. If we gave an AI the goal of maintaining the water level behind a dam, it might flood a town, not caring about the people who drowned. If we gave it the goal of making paper clips, it might turn all the matter in the reachable universe into paper clips, including our possessions and bodies. If we asked it to maximize human happiness, it might implant us all with intravenous dopamine drips, or rewire our brains so we were happiest sitting in jars, or, if it had been trained on the concept of happiness with pictures of smiling faces, tile the galaxy with trillions of nanoscopic pictures of smiley-faces.29 I am not making these up. These are the scenarios that supposedly illustrate the existential threat to the human species of advanced artificial intelligence. They are, fortunately, self-refuting.30 They depend on the premises that (1) humans are so gifted that they can design an omniscient and omnipotent AI, yet so moronic that they would give it control of the universe without testing how it works, and (2) the AI would be so brilliant that it could figure out how to transmute elements and rewire brains, yet so imbecilic that it would wreak havoc based on elementary blunders of misunderstanding. The ability to choose an action that best satisfies conflicting goals is not an add-on to intelligence that engineers might slap themselves in the forehead for forgetting to install; it is intelligence. So is the ability to interpret the intentions of a language user in context. Only in a television comedy like Get Smart does a robot respond to “Grab the waiter” by hefting the maître d’ over his head, or “Kill the light” by pulling out a pistol and shooting it. When we put aside fantasies like foom, digital megalomania, instant omniscience, and perfect control of every molecule in the universe, artificial intelligence is like any other technology. It is developed incrementally, designed to satisfy multiple conditions, tested before it is implemented, and constantly tweaked for efficacy and safety (chapter 12). As the AI expert Stuart Russell puts it, “No one in civil engineering talks about ‘building bridges that don’t fall down.’ They just call it ‘building bridges.’” Likewise, he notes, AI that is beneficial rather than dangerous is simply AI.

### T Exemptions---2ac

#### a---The plan expands the area, so core laws deal with employer power. That’s a non-statutory exemption because Courts are ruling against labor.

Sanjukta Paul 19. Assistant Professor of Law, Romano Stancroff Research Scholar. “9 - The Case for Repealing the Firm Exemption to Antitrust (A Modest Proposal; or, a Response to Professor Epstein)”. from Part II - Labor Law Is Out of Date. Published online by Cambridge University Press: 01 November 2019 <https://www-cambridge-org.proxy.library.emory.edu/core/books/cambridge-handbook-of-us-labor-law-for-the-twentyfirst-century/case-for-repealing-the-firm-exemption-to-antitrust/E8BA98C6D6606A6E6BC1073291C3F277>

Professor Epstein argues in this volume and elsewhere for repealing the already limited economic coordination rights accorded to working people. In this chapter, I respond to his argument – and by extension, to the more general skepticism toward the coordination rights of working people. I begin by first questioning a different exemption from the putatively general norm about the “dangers of collective behavior.”Footnote6 Business associations themselves enjoy an almost unlimited exemption from antitrust law, one that is now treated as axiomatic. But it wasn’t always. The “firm exemption” is not based upon the text of the statute, and it was never endorsed by the legislators who conceived and drafted the Sherman Act. Indeed, they would likely have rejected it in its present form. At the same time, the legislative record is plain that legislators favored and intended coordination rights for working people to be preserved under the statute.Footnote7 But judges rewrote the Act in light of their own vision for the allocation of coordination rights – and that vision favored business firms as the locus of economic coordination and disfavored labor organizations.Footnote8

Professor Epstein’s “welfarist” argument against the labor exemption relies upon a normative benchmark given by “the competitive order” centered by Chicago School law and economics.Footnote9 But no such benchmark can exist without a definition – necessarily supplied by law, not economics – of the entities that are to engage in that competition.Footnote10 The law defines business firms, rather than, say, cartels, as the entities that are to engage in competition, thereby exempting their internal coordination from antitrust scrutiny. The other normative benchmark upon which Professor Epstein’s argument at least indirectly relies is the notion of freedom of contract, as embodied in the pre–New Deal common law of labor relations. However, the common law’s denial of coordination rights to working people was in fact justified in hierarchical, antiliberty terms – illustrating a more basic justificatory problem with the policy decision to abridge working people’s freedom of association from a liberal perspective.

#### The scope of competition law defines it goals.

ESE No Date. Erasmus School of Economics (as per their website, “The Erasmus Center for Economic and Financial Governance is an international multidisciplinary network of leading researchers and societal stakeholders initiated by researchers from Erasmus School of Economics and Erasmus School of Law. ECEFG conducts interdisciplinary research (law, economics and political science) and contributes to current debates in public and in academia on issues relating to European and global economic and financial governance.”). "Competition Policy". <https://www.eur.nl/en/ese/affiliated/ecefg/research/competition-policy>

Competition Policy

Research in this field consists of two broad areas. The first area – Theory and Implementation of Competition Law and Policy – refers to fundamental and applied research into topics that are traditionally seen as the core of competition policy. The second area – Scope of Competition Law and Policy – refers to all research on the effect and desirability of including new considerations in competition law and policy in order to address the challenges of our time, such as the increasing power of big tech firms, or global warming.

Theory and Implementation of Competition Policy

This covers for instance collusion, abuse of dominance, mergers, market regulation and state aid. Some examples of research topics are:

* the practices firms can use to engage in collusion and its welfare consequences;
* the practices firms can use to abuse a dominant position and its welfare consequences;
* which practices can be considered proof of such activities;
* how to regulate access to a market;
* how to properly assess the effects of a particular practice or merger;
* the practices, by which the state and public authorities distort competition such as subisidies and tax measures
* the interpretation and application of EU and national competition law by Competition Authorities and Courts and the extent to which they achieve the goals of competition policy

Scope of Competition Policy

The effectiveness of European competition law and policy in combination with rapid technological changes have raised questions about its proper scope. Which policy objectives can and should be pursued by means of competition law and policy, and which should be delegated to other legal fields and policies? Some examples of specific research questions include:

* Can and should competition law be used to protect the privacy of consumers on the internet?
* Information gathered by firms can be used to increase their own profits. How does this affect consumers, and what does this depend on? Can and should competition law deal with market power derived from information gathering? For instance, should the big five tech giants be forced to divest activities?
* Should competition policy also include considerations of economic inequality or environmental effects?
* Can competition law remain effective if it is used for more than safeguarding fair competition?

#### That means the aff must change the consumer welfare standard.

Trevor Wagener 21. "The Curse of Tradeoffs: Neo-Brandeisians vs. Consumers". Disruptive Competition Project. 5-21-2021. https://www.project-disco.org/competition/052121-the-curse-of-tradeoffs-neo-brandeisian-antitrust-versus-consumers/

Neo-Brandeisians seek to replace the longstanding objective and principles-based framework of the consumer welfare standard in antitrust enforcement with an amorphous, process-based framework guided by an ethos one Neo-Brandeisian described as: “Big is bad. Just don’t let big firms merge. The end.” A movement dedicated to replacing a consumer welfare-maximizing approach with an assortment of competing goals has proven unable to offer a quantified, systematic cost-benefit analysis justifying such a radical change, instead relying upon anecdotal evidence and moving prose. The many goals of the Neo-Brandeisian approach are often rhetorically appealing, but the rhetoric hides a simple truth: When you target every variable, you effectively target none. Addressing a wide range of goals through antitrust policy requires de-emphasizing consumer welfare, creating fundamental tradeoffs expected to harm consumers relative to the status quo. The willingness to sacrifice consumer welfare in order to achieve other ends is a defining characteristic of Neo-Brandeisian antitrust. This is illustrated by concrete Neo-Brandeisian critiques, which typically emphasize perceived harms to businesses rather than harms to consumers. For example, the Neo-Brandeisian activist group American Economic Liberties Project (AELP) published a pair of policy briefs on May 3 that criticize online service operators for a litany of purported inconveniences to businesses over a combined 22 pages, but struggle to quantify any harms to ordinary consumers and users. Those few purported harms to consumers that AELP raised are distinctly qualitative rather than quantitative, consistent with the broader reluctance of prominent Neo-Brandeisian thinkers to conduct a rigorous quantitative cost-benefit analysis of their antitrust policy prescriptions relative to the consumer welfare standard.

### T Per Se---2ac

#### a---the aff per se bans patterns of conduct in labor markets---like wage fixing--- that’s Posner, cengiz, and…

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Conclusion This volume outlines several essential steps to redress the imbalances and rein in the power of employers. It offers ideas on how we can rewrite the rules of the economy to make the labor market more competitive and prevent the anticompetitive practices employers have systematically used to increase their market power. The chapters in this volume show that there is much that can be done at both the state and the national levels. For instance, mergers should be screened for effects on workers, just as they are already screened for effects on consumers. No-poach and noncompete agreements should be made per se illegal for low-wage workers.

#### ---Prohibitions include per se and rule of reason.

Anu Bradford and Adam S. Chilton 18. Anu Bradford Henry L. Moses Professor of Law and International Organization, Columbia Law School. Adam S. Chilton. Assistant Professor of Law and Walter Mander Research Scholar. “Competition Law Around the World from 1889 to 2010: The Competition Law Index”. JOURNAL OF COMPETITION LAW & ECONOMICS, VOL. 14, P. 393, 2018 (2018). https://scholarship.law.columbia.edu/cgi/viewcontent.cgi?article=3519&context=faculty\_scholarship

Before discussing our data and the coding of the CLI, it is important to recognize that there are limitations to any index that attempts to quantify competition regulation. This is because it is difficult to produce a single metric that tells the comprehensive story of country’s competition regime. For example, if a specific type of conduct is prohibited, is it prohibited always (per se) or sometimes (rule of reason)? This seems like a relevant distinction to code, but it turns out to be difficult to capture systematically in many jurisdictions. For instance, Article 101(3) of the Treaty on the Functioning of the European Union (TFEU) seems to regulate anticompetitive agreements under the rule of reason standard in the European Union, but, in practice, cartels are per se prohibited. This highlights the challenge of coding even just the law in books, let alone accounting for all the nuances of a country’s competition policies.20

#### c--- No bright line---rule of reason is a prohibition---they function synonymously.

Light 19, Sarah E. Light Assistant Professor of Legal Studies and Business Ethics, The Wharton School, University of Pennsylvania., The Law of the Corporation as Environmental Law, 71 Stan. L. Rev. 137, 2019, Lexis/Nexis

While antitrust law can serve as an environmental mandate by prohibiting collusive behavior that keeps environmentally preferable goods from the market, there is also conflict between antitrust law's goals of promoting competition and environmental law's goals of promoting [\*177] conservation. 192 Because antitrust law's per se rule and rule of reason operate on a somewhat fluid continuum, 193 this Subpart discusses the two doctrines together. The per se rule operates as a prohibition, whereas the rule of reason operates as both a prohibition and a disincentive. As noted above, antitrust law generally prohibits certain types of market activity - price fixing, horizontal boycotts, and output limitations - as illegal per se, and harm to competition is presumed. 194 For example, if an industry association declines to award a seal of approval necessary for a product's sale without any good faith attempt to test the product's performance, but rather simply because that product is manufactured by a competitor, such an action would be illegal per se. 195 Under this Article's framework, a per se violation is thus a prohibition. The more fact-intensive inquiry under the rule of reason tests "whether the restraint imposed is such as merely regulates and perhaps thereby promotes competition or whether it is such as may suppress or even destroy competition." 196 While this extremely broad statement might suggest that any fact is relevant to the inquiry, the salient facts under the rule of reason are "those that tend to establish whether a restraint increases or decreases output, or decreases or increases prices." 197 If an anticompetitive effect is found, then the action is illegal and the rule of reason operates, like the per se rule, as a prohibition. 198 The rule of reason can also operate as a disincentive, even if no [\*178] court finds an anticompetitive effect, as uncertainty and litigation risk may discourage firms from undertaking legally permissible, environmentally positive industry collaborations. 199 Associations of firms have adopted numerous mechanisms of private environmental governance to address the management of common pool resources like fisheries, forests, and the global climate. 200 Examples include the Sustainable Apparel Coalition's Higg Index 201 and the American Chemistry Council's Responsible Care program. 202 But private industry standards raise special antitrust concerns. An agreement among competitors with respect to product or process specifications may exclude competitors who fail to meet such standards, raising the specter that such industry collaborations really constitute output limitations or efforts to limit competition. 203 While the U.S. Supreme Court has scrutinized private standard-setting associations carefully, 204 it has noted that if associations "promulgate … standards based on the merits of objective expert judgments and through procedures that prevent the standard-setting process from being biased by members with economic interests in stifling product competition … , those private standards can have significant procompetitive advantages." 205 In the absence of price fixing or a boycott, a rule of reason analysis generally applies to product standard setting by private associations. 206 The uncertain outcome [\*179] inherent in the application of antitrust law in this context could therefore serve as a potential disincentive to the adoption of private industry standards. 207 The challenge of course is that some form of explicit sanctions on noncompliant industry members may be necessary for private industry standards to be effective. In the context of private reputational mechanisms like the New York Diamond Dealers Club, 208 Barak Richman has pointed out that the Club's use of reputational sanctions and voluntary refusals to deal with actors who flout industry norms, while welfare enhancing, could nonetheless amount to violations of antitrust law. 209 This echoes the concern raised by Andrew King and Michael Lenox in their extensive empirical analysis of the Responsible Care program created by the Chemical Manufacturers Association (now the American Chemistry Council). 210 King and Lenox concluded that the absence of explicit sanctions on members who failed to meet the standards set by the program left the program vulnerable to "opportunism." 211 While they suggested that industry associations could look to third parties to enforce the rules, 212 an alternative way to facilitate the long-term environmental benefits of stronger sanctions would be to interpret antitrust law in conformity with the environmental priority principle presented below. 213 [\*180] In some instances, the conflict between the values of promoting competition and conserving environmental resources can be stark. 214 Jonathan Adler, for example, has identified this conflict in the context of fisheries - a tragedy of the commons situation in which some form of collective action is required to avoid overfishing. 215 He cites as an example Manaka v. Monterey Sardine Industries, Inc., in which a fisherman was excluded from a local fishing cooperative. 216 The fisherman sued the cooperative under the Sherman Act, and the court found an antitrust violation in his exclusion. 217 While the fishing cooperative's policies were no doubt exclusionary, Adler contends that they also promoted conservation by restricting catch. 218 The fishery collapsed by the 1950s, a collapse Adler hypothesizes might have been "inevitable" but that perhaps might not have occurred in the absence of the antitrust suit. 219 While a court performing a rule of reason analysis must consider whether a restraint on trade suppresses or destroys competition, Adler points out that courts may also "consider offsetting efficiencies from otherwise anticompetitive arrangements." 220 It is not clear, however, that the courts have consistently taken these factors into account. 221 Among other potential remedies, Adler argues that to resolve this tension between antitrust law, on the one hand, and private collective action to conserve environmental resources, on the other, courts should more actively consider the "ancillary conservation benefits of otherwise anticompetitive conduct." 222 Recognizing the long-term health of a fishery would be consistent with antitrust law's purpose of ensuring viable markets exist in the future, and consistent with the environmental priority principle introduced below. 223

### ADV CP---2ac

#### Rehighlight not only about big tech---all deviations from consumer welfare link.

Marianela Lopez-Galdos 7-28-21. Global Competition Counsel at the Computer& Communications Industry Association, previously served as Director of Competition & Regulatory Policy, and is a professor at George Washington University Competition Law Center and at the University of Melbourne Law School. “Policy Decisions of Antitrust Institutions Series: The Future of the FTC and Its Perils”. Disruptive Competition Project. <https://www.project-disco.org/competition/072821-policy-decisions-of-antitrust-institutions-series-the-future-of-the-ftc-and-its-perils/>

The FTC’s Enforcement Authority Let’s get started by understanding why the FTC’s antitrust policy rerouting has raised a lot of questions. The FTC is one of the two federal agencies that has authority over competition, and consumer protection matters. Throughout its enforcement, advocacy and regulatory activities, the FTC has endorsed competition policy that has inured to the benefit of consumers in the U.S. economy. As most DisCo readers know, the FTC under a Neo-Brandeisian leader has in a short period of time made drastic changes to the bipartisan consensus that had traditionally governed the FTC’s enforcement decision-making framework. In this respect, the most prominent example is the FTC’s recent decision to rescind the [Statement of Enforcement Principles Regarding “Unfair Methods of Competition” Under Section 5 of the FTC Act](https://www.ftc.gov/public-statements/2015/08/statement-enforcement-principles-regarding-unfair-methods-competition) (Section 5 Policy Guidelines). In 2015, under the Obama administration, the FTC adopted the Section 5 Policy Guidelines with bipartisan support. These guidelines were the result of a lot of work put forward throughout many years by the antitrust community including academia and FTC staffers. Although the Guidelines were short, and maybe imperfect, they covered the minimum principles to guide the FTC when enforcing Section 5 of the FTC Act relating to ‘unfair methods of competition’ that fell outside the scope of the Sherman and Clayton Acts. Moreover, Section 5 Policy Guidelines reaffirmed the FTC’s commitment to carrying out its antitrust mandate under the consumer welfare standard as [noted](https://www.ftc.gov/news-events/press-releases/2015/08/ftc-issues-statement-principles-regarding-enforcement-ftc-act) by the Chairwoman Edith Ramirez: “The promotion of consumer welfare is a cornerstone of the FTC’s antitrust enforcement, and these principles reaffirm the agency’s legal framework in carrying out that important mission.” But most importantly, the Section 5 Policy Guidelines acted as the guardrails to avoid situations where the FTC, in an effort to expand its enforcement authority, would lose many antitrust stand-alone Section 5 cases in court, to the **detriment of the institution itself.** Indeed, the Section 5 Policy Guidelines were the result of lessons learned throughout the history of the FTC and represented a tool to avoid history repeating itself. In this respect, it is important to [recall](https://scholarship.law.wm.edu/cgi/viewcontent.cgi?article=3800&context=wmlr) that back in the 70s, under Chairman Pertschuck, and in the following years, the FTC suffered immensely due to disparities between enforcement promises and implementation capabilities. Much of the **institutional suffering** came from the agency not self-imposing limitations and standards to bring cases under Section 5 of the FTC Act which led to **numerous litigation losses**, **consequential institutional reputational damage, and lack of political suppor**t

### States CP---2ac

#### d---The DOJ and FTC undermine.

The Open Markets Institute and Service Employees International Union 19. “How the Antitrust Agencies Can Help—Instead of Hurt—Workers”. https://www.justice.gov/atr/page/file/1217856/download

The DOJ and the FTC have largely failed American workers today by allowing a concentration crisis in scores of industries to weaken competition for labor. Instead of actively policing mergers for harms to workers, they have let employer-side concentration reach very high levels. Troublingly, when the FTC and DOJ have acted against practices in labor markets, the two agencies often have used antitrust laws to either undermine efforts by employees and states to challenge abusive behavior by employers or actually targeted efforts by workers or professional to work together. The FTC, for instance, has filed numerous complaints against workers for engaging in collective bargaining and other joint action. Furthermore, the FTC has campaigned against state and local occupational licensing rules that can enhance the bargaining power and earnings of workers, professionals, and independent entrepreneurs. The DOJ meanwhile has endorsed legal standards that would empower franchisees to collude against workers. The DOJ’s and FTC’s general inactivity against employers and activity against workers reinforce and deepen inequality between the individual and the corporation. The agencies should reorient their enforcement priorities and focus on protecting workers from employers rather than on interfering with the basic rights of workers, professionals, and independent entrepreneurs to organize.2

#### 1---Trump thumps.

Tom McCarthy 20. National affairs correspondent for Guardian US. "Trump v the states: how the president is remaking the government in his image." The Guardian. 4-1-2020. https://www.theguardian.com/us-news/2020/apr/11/trump-states-governors-clashes

Clashes between presidents and states are nothing new. But according to government theorists, public affairs experts and political analysts, Trump’s rattling of the federalist compact, by which the 50 states are both autonomous and bound in a national union, is unprecedented in modern times. “You’ve redefined the role of state governors,” said David Super, a professor at Georgetown Law. “Governors must grovel to the president. Governor [Gavin] Newsom [of California], Governor Andrew Cuomo [of New York] have understood that, and they’re doing it. Governor [Gretchen] Whitmer has largely refused, and Michigan is going through hell as a result. “These governors are more like provincial chiefs under this system, and if we want to restore federalism in this country we will have to make some very dramatic changes after this is over. If we don’t, federalism is dead.” Experts voice concern that the fight between states over medical equipment that has broken out in the vacuum of federal leadership could make it harder for states to reach agreement later about how to reopen the economy. They warn that patchwork state plans for absentee voting and voting by mail in November could undermine the legitimacy of the presidential election. In some cases they question what it will mean, once the coronavirus crisis has passed, to call the states autonomous, or for that matter to call them “united”. If Trump tears up the parts of the federalist system he does not like, said political analyst Lincoln Mitchell, other parts that conservatives like a lot, such as the electoral college and the US Senate, could grow harder to defend. That could be especially true, Mitchell, said, if the conservative majority on the US supreme court repeats its intervention of last week, when it blocked extended voting in Wisconsin in spite of the pandemic. Likewise if the presumptive Democratic presidential nominee, Joe Biden, like Hillary Clinton before him, wins the popular vote but loses in the electoral college. “It is not inconceivable that Joe Biden could win this election by seven points in the popular vote and still lose the electoral college,” Mitchell said. “If that happens for the second time in a row, that is a crisis of governance – not a crisis of democracy, because it’s not a democratic system really – but a crisis of governance and a crisis of legitimacy.” Super has coined the term “flippant federalism” to characterize how the White House is treating the governors. He referred to reports of incidents in which the federal government has intercepted ventilators and other equipment acquired by the states, which Trump appears to be handing out on a political patronage basis. “On the one hand, they’re telling the states they’re on their own,” said Super. “On the other, they’re seizing the supplies that the states get on their own.” Martin O’Malley, a former governor of Maryland and presidential candidate, has coined a different term: “Darwinian federalism”. “His [Trump’s] behavior is not in keeping with the office of president,” O’Malley told the Guardian in an email. “The notion that governors have to bow down and praise him in order for their citizens to receive federal disaster assistance is contrary to the very nature of a republic.” But Keith Whittington, a professor of politics at Princeton University specializing in constitutional theory, said Trump was correct in his assertion that states have traditionally been responsible for handling public health crises. “It looks unusual relative to other countries that we are relying so heavily on state and local officials,” he said, “but that has been the American tradition.” A national public health crisis is a rare occurrence, Whittington said, adding that statements by Trump and Jared Kushner were “really strange”. In his sole public appearance during the crisis, the presidential son-in-law said: “The notion of the federal stockpile was, it’s supposed to be our stockpile. It’s not supposed to be states’ stockpiles that they then use.” Whittington replied: “The national stockpiles are designed precisely in order to make them available to those who need them in moments of crisis. The attitude of this administration, and certainly Jared Kushner’s particular remarks on this, are pretty surprising and ultimately not very helpful.” ‘Lip service to federalism’ The story of the United States is a long one. Elasticity is built into the system. Looking ahead, everyone sees something different. “I’d be surprised if what we’re seeing now results in a substantial permanent change in the relationship between the states and the federal government,” Whittington said. Super said a drainage of power from the states, if it comes to that, would produce a more empowered federal government. “The old argument against so-called big government is that states could do it,” Super said. “We’re here proving that they can’t. “We’re also proving that whatever people once believed about the importance of states, they don’t believe it any more, and that federal politicians will pay lip service to federalism but show states no respect at all when it matters the most.”

#### 6---no spillover

Natelson 14 [Rob, Independence Institute's Senior Fellow in Constitutional Jurisprudence, Jan 4, 2014, "Lessons for Federalism from Colorado's Pot Legalization" The American Thinker, [www.americanthinker.com/2014/01/lessons\_for\_federalism\_from\_colorados\_pot\_legalization.html](http://www.americanthinker.com/2014/01/lessons_for_federalism_from_colorados_pot_legalization.html)

From Colorado's marijuana "legalization" some federalism advocates draw a conclusion that is both (1) obvious and (2) wrong. The conclusion is that the only way to restore constitutional limits is for constitutionalists to form alliances with hard core "progressives" in areas of common concern. After all, wasn't it a right-and-left-wing coalition that successfully repealed Colorado's marijuana ban? There are, however, at least two problems with this approach. First, the few areas of common concern are mostly very small and of limited importance. "Progressives" very rarely take a genuine pro-federalism position, and when they do, the issue is usually narrow. By any objective measure, marijuana legalization is small POT-atoes compared to massive programs like Obamacare.

### Court clog---2ac

#### 2---Won’t clog the courts---plan is clear and easy to interpret---that’s kim… and

William Berkowitz et. al, 21. Berkowitz is Partner and National Chair, Antitrust & Competition Practice Group. Brandon Bigelow is Partner and National Co-Chair, Antitrust & Competition Practice Group and Alison Eggers is Partner, Antitrust & Competition and Franchise & Distribution Practice Groups. “Key Trends in Commercial Litigation: Antitrust.” Commercial Litigation Outlook 2021, p. 8, https://www.seyfarth.com/dir\_docs/publications/Commercial-Litigation-Outlook-2021-Edition.pdf

Companies in all sectors should expect that the FTC and DOJ may give more scrutiny to transactions that in the past might have easily cleared HSR review. Finally, the parties in a number of major antitrust class action litigation matters reached settlements in 2020, including matters involving alleged price fixing in the packaged seafood market and collusion among various Blue Cross/Blue Shield insurance providers to suppress competition between those plans. Businesses are often members of these certified classes, and given the volume of their purchases in these markets, often can recover substantial sums from these settlement funds. Businesses should be on the lookout for court-ordered notices concerning these settlements to make sure they do not waive any rights. Businesses also should be skeptical of companies that offer to “assist” with the submission of claims; these companies often demand a substantial percentage of any recovery for their work, even though settlements are typically designed to make claims submission easy.

#### 4----Courts clogged now---covid, backlogs, vacancies

Meagan Flynn & Michael Brice-Saddler, 1/1. Meagan Flynn covers the Virginia, Maryland and D.C. congressional delegations on The Post's Metro team. She was previously a reporter at the Houston Press and the Houston Chronicle. Michael Brice-Saddler covers D.C. government and politics for The Washington Post's Metro desk. He joined The Post in June 2018 as an intern after graduating from the University of Maryland. “D.C. courts ‘sound the alarm’ on judicial vacancies as local officials demand movement in Senate.” January 1, 2022. https://www.washingtonpost.com/dc-md-va/2022/01/01/dc-judges-vacancy-senate/

He noted that the D.C. Superior Court has the distinction among the nation’s trial courts of having the highest number of case filings per capita in the United States. There are more than 10,000 criminal cases pending, more than doubling 2020′s case load, he noted. The coronavirus pandemic added an additional challenge; jury trials resumed in the spring after being suspended for roughly a year. D.C. Council member Charles Allen (D-Ward 6), who chairs the council’s judiciary committee, said the vacancies cause delays in justice for perpetrators, victims and survivors, and he added that some people have been waiting for trial in the D.C. jail for a longer period of time than they would serve if they were convicted. “This is a massively dysfunctional part of our criminal justice system, which is already dysfunctional because of so many federally controlled elements,” Allen said. “When you add on top of it a massive case backlog in the months and years to come, it puts our entire criminal justice system at a massive disadvantage.” Jurors in a fire station, high school gym and the ‘Cow Palace.’ How Maryland is restarting jury trials in the pandemic. Allen stressed that the challenges created by the vacancies aren’t just limited to criminal cases; other judicial matters involving families, estates and marriages are also affected. Beverly L. Perry, senior adviser to Mayor Muriel E. Bowser (D), said judges have had to shuffle around their schedules to accommodate cases they wouldn’t otherwise be hearing. She said she recently learned Superior Court judges typically have 200 cases or fewer on their docket, but now have 300 to 400. “A criminal judge might be handling a family court calendar — this problem keeps escalating,” Perry said. Perry applauded Norton’s legislation, noting its similarity to how local D.C. legislation can be passively approved by Congress if there is no action after 30 working days. “It’s one of those things that should be perfunctory, it shows another reason we should be a state — and it shows how people that have disregard for our city can create a harmful outcome,” Perry added. “It exemplifies how we have no voice in the Senate at all.” The Senate Homeland Security and Governmental Affairs Committee scrutinized problems created by the vacancies during a recent hearing for three judicial nominees last month, and Chairman Gary Peters (D-Mich.) highlighted these problems in his opening remarks. When Sen. James Lankford (R-Okla.) asked the three nominees what they thought the biggest problems were facing the D.C. courts, Court of Appeals nominee Loren L. AliKhan, the D.C. solicitor general, described the backlog as “the first-, second-, third- and fourth-biggest problem facing the District.”

#### 7---Google and Facebook thump.

Mike Scarcella, 7-29. Reuters columnist who produces a weekly running article called “this week in antitrust.” “Court panel weighs Google bid to move advertising antitrust cases.” July 29, 2021. https://www.reuters.com/legal/litigation/court-panel-weighs-google-bid-move-advertising-antitrust-cases-2021-07-29/

(Reuters) - Lawyers for Google LLC and Facebook Inc on Thursday urged the Judicial Panel on Multidistrict Litigation to transfer dozens of digital advertising-related antitrust lawsuits they are facing to California federal court, over opposition from some plaintiffs' lawyers who argued centralization would unfairly **slow down proceedings in pending cases around the country**. Lawsuits filed by U.S. states, publishers, advertisers and small businesses contend online advertising practices at Google and Facebook have unlawfully stifled competition and harmed consumers and companies. Google and Facebook want the cases moved to the U.S. District Court for the Northern District of California, **where the largest number of related lawsuits are pending**. Google's lawyer, Eric Mahr, co-leader of the antitrust group at Freshfields Bruckhaus Deringer, told the JPML that failure to centralize the cases would raise the possibility of "inconsistent rulings" from district judges. Representing Facebook, Kevin Orsini, co-head of the litigation department at Cravath, Swaine & Moore, backed Google's argument for centralization in California, where both companies are based. Girard Sharp partner Jordan Elias, advocating for an advertiser class, argued against centralization. The cases in district courts are at different stages, he said. "Judicial economy favors not interfering with these ongoing proceedings," he said. Discovery, he argued, could be coordinated without merging the cases. U.S. District Judge Matthew Kennelly of the Northern District of Illinois, serving on the JPML, questioned Elias about how some of the class members he is representing mirror plaintiffs in the complaint Texas Attorney General Ken Paxton and a group of other state attorneys general filed in December against Google in the U.S. District Court for the Eastern District of Texas. "How does it make sense to have these two cases, which basically overlap, in two different places?" Kennelly said. "The opposition of you folks and some of the other folks on the plaintiffs' side to centralization in this case is a little bit perplexing. In virtually every other situation we've had before us, you guys are out in front asking us to centralize it." Plaintiffs lawyer Mark Lanier, counsel to Texas and other states, said his argument against centralization was the first in his career. "Speed really is important here," he told the panel. Texas and state plaintiffs have "been intensely involved in this," Lanier said. "We've got over 2 million documents. We've got documents and information from 25 third-parties at this point." Lanier's briefing to the panel had raised an issue about venue pointing to new bipartisan federal legislation introduced in May that would exempt antitrust actions brought by state attorneys general from motions to transfer. He urged the JPML to exclude the states' lawsuit against Google from any transfer order, or "respect the states' choice of forum by centralizing all Google ad tech litigation in the Eastern District of Texas." The effective date of the law, if it's enacted, is June 1

### Defense innovation da---2ac

#### 2---recent ruling thumps or solves the link---monopsonies in defense are gone.

DOJ, 12-16-21.  "Six Aerospace Executives and Managers Indicted for Leading Roles in Labor Market Conspiracy that Limited Workers’ Mobility and Career Prospects". DOJ. 12-16-2021. https://www.justice.gov/opa/pr/six-aerospace-executives-and-managers-indicted-leading-roles-labor-market-conspiracy-limited

A federal grand jury in Bridgeport, Connecticut, returned an indictment yesterday charging a former manager of a major aerospace engineering company and five executives of outsource engineering suppliers (Suppliers) for participating in a long-running conspiracy to restrict the hiring and recruiting of employees among their respective companies. The conspiracy affected thousands of engineers and other skilled workers in the aerospace industry who perform services in the design, manufacturing and servicing of aircraft components for both commercial and military purposes. According to the one-count felony indictment unsealed today in the U.S. District Court for the District of Connecticut, six individuals — Mahesh Patel, of Connecticut; Robert Harvey, of South Carolina; Harpreet Wasan, of Connecticut; Steven Houghtaling, of Connecticut; Tom Edwards, of Connecticut; and Gary Prus, of Florida — conspired with unnamed others to allocate employees by agreeing not to hire or solicit employees from each other’s companies. This indictment is the first in an ongoing investigation into labor market allocation in the aerospace engineering services industry. Patel, described as a leader of the conspiracy given his position and authority as the Suppliers’ common customer, was [previously charged by complaint](https://www.justice.gov/opa/pr/former-aerospace-outsourcing-executive-charged-key-role-long-running-antitrust-conspiracy). He was arrested and appeared before a federal magistrate judge on the charge last week, and was released on a $100,000 appearance bond. The remaining defendants are expected to appear before federal district courts in different districts this week. “Conduct that corrupts competition for workers has no place in our economy,” said Assistant Attorney General Jonathan S. Kanter of the Department of Justice’s Antitrust Division. “Our investigation revealed a prolonged and widespread scheme to deprive aerospace workers of the ability to plan their own careers and earn competitive pay. The Department of Justice and our law enforcement partners will continue to hold individuals and companies accountable for criminal conduct aimed at depriving workers of the myriad benefits that flow from competition.” “No one should be illegally denied the opportunity to pursue better jobs, higher pay and greater benefits,” said Peter S. Jongbloed, Counsel to the U.S. Attorney for the District of Connecticut. “It is vital that the labor market in the defense and aerospace remain fair, open and competitive, and we look forward to continuing the partnership with the Antitrust Division and our law enforcement partners to prosecute this important case.” “Anticompetitive practices undermine legitimate procurement and acquisition processes designed to ensure equity among parties that do business with the government. The DoD Office of Inspector General’s Defense Criminal Investigative Service (DCIS) is fully committed to prioritizing investigations involving corruption of the DoD labor market,” said Principal Deputy Director James R. Ives of the DCIS. “We will continue to partner with the Department of Justice to ensure the labor market that supplies goods and services to the U.S. military remains competitive.”

#### Recent FTC suit thumps.

Joe Gould 2/3. Senior Pentagon reporter for Defense News. “Why the FTC’s lawsuit could chill the market for defense deals.” 2/3/22. https://www.defensenews.com/industry/2022/02/02/why-the-ftcs-lawsuit-could-chill-the-market-for-defense-deals/

WASHINGTON ― The federal government’s move to block Lockheed Martin’s planned $4.4 billion purchase of Aerojet Rocketdyne could have a chilling effect on future mergers and acquisitions among large defense firms, according to experts.

With the Federal Trade Commission’s lawsuit last week to stop the deal, it rejected a proposed behavioral remedy that would require Aerojet continue to supply missile components to Lockheed’s competitors. That’s being interpreted as a sign regulators will more heavily scrutinize vertical acquisitions, in which a company acquires a supplier.

“Anybody doing a sizable vertical deal has to look at this precedent and recognize, if there’s a real vertical issue, the [FTC’s] predilection may be not to do a remedy, which means it’s an up or down decision,” said Jeff Bialos, an antitrust attorney and former deputy undersecretary of defense for industrial affairs.

In its announcement of its opposition, the FTC argued that if the acquisition between Lockheed, “the world’s largest defense contractor,” and Aerojet, the “last independent U.S. missile propulsion provider” were to take place, “Lockheed will use its control of Aerojet to harm rival defense contractors and further consolidate multiple markets critical to national security and defense.”

Some view the FTC’s tough language as a clear signal to the defense industry.

“It’s hard not to read the complaint any way other than that big vertical transactions will be viewed very skeptically by the FTC, and it seems like it’s pretty clear,” said Jerry McGinn, a Pentagon manufacturing and industrial base policy official in the Obama and Trump administrations.

Brett Lambert, who served as a deputy assistant secretary of defense for manufacturing and industrial base policy in the Obama administration, predicted the decision would reverberate through the board rooms of every prime contractor in the defense sector. Lambert was Northrop Grumman’s vice president for corporate strategy when the company made a similar acquisition.

“Their position is quite clear, and how industry reacts and whether that’s in the best interest of the warfighter and the taxpayer is still unclear,” said Lambert, now the managing director of the Densmore Group, a national security and intelligence consultancy.

#### 3---Labor monopsony turns---reduces employment by 13% and labor’s share of national output by 22%---wages boost growth---increases talent retention, spending, tax profits, lowers welfare, causes education and productivity---that’s posner and wei and…

Eric A. Posner 8/13/21. Kirkland & Ellis Distinguished Service Professor at University of Chicago. How Antitrust Failed Workers. Oxford University Press, 2021.

The economic consequences of labor market power are analogous to those of product market power. Product market power has two wellknown effects. It redistributes from consumers to the firm: consumers must pay more for products, and the firm earns greater profits at their expense. And it creates waste or deadweight loss. Some consumers would be willing to pay the efficient, marginal cost price that the firm would have charged in a competitive market but are not willing to pay the higher price the monopolist chooses to charge. Similarly, monopsony power has two effects. It redistributes from workers to employers by lowering wages. And it creates waste: some workers would have been willing to work for the employer if they had been paid their full marginal revenue product but will quit if they are paid the marked-down wage the monopsonist offers. This leads to increased unemployment or nonemployment as workers find prevailing wages unacceptable and exit the labor force or refuse to take available jobs. Economic output also declines. Monopsony power creates other negative effects as well. First, to the extent that the degree of monopsony power differs across employers, it will also lead to misemployment: workers may be more productive at employer A, which has a lot of labor market power, than at employer B, which has a little. But B may offer higher wages because of its limited labor market power. The worker may thus choose to work at B, lowering the productivity of the economy. Misallocation may be particularly severe because of the two-sided matching problem. If matches between workers and firms generate specific benefits, monopsony can distort which firms match which workers, which will lower the allocative efficiency of the market. Second, employers will often cut benefits, rather than cut wages, to take advantage of workers who are locked into the job. The firm has no need to retain these workers and thus may wastefully degrade conditions of work these “stuck” workers particularly value, instead catering only to the workers the firm is worried about losing.26 Third, monopsony raises prices for consumers. This may seem counterintuitive: won’t lower wages to workers be passed through to consumers as reduced prices? That argument is often made as a defense of monopsony power. In fact, however, this argument is wrong. To see this, note that if firms employ fewer workers, they will produce less output, resulting in higher prices. The labor cost savings accrue to the employer itself (or its shareholders), not to the buyers of its goods. Those buyers will pay a price that is determined by the structure of the product market, not the labor market. So, for example, if the employer is also a monopolist in the product market, it will charge the buyers the monopoly price—which is determined by how much buyers are willing to pay. And if the product market is competitive, the employer will charge prices for its goods that are no higher than the competitive price—with its competitors taking up the slack as the employer itself will produce less given its small workforce. The technical explanation is that while the firm lowers wages to workers, the cost to the firm of hiring workers rises as the firm now considers the fact that, when it hires an additional worker, it also will pay its other workers more. When a monopsonist hires a single worker, it must increase wages for all its workers. (Recall that employers cannot easily wage-discriminate.)27 If this seems paradoxical, note that it is merely the flip side of a well-understood feature of monopolistic control of product markets: that a monopolist produces fewer products and charges a higher price for them than does a competitive firm. Monopoly and monopsony are two sides of the same coin, and both harm labor and product markets. Fourth, and precisely for this reason, monopsony power reinforces and exacerbates monopoly power. In fact, both can be seen as two alternative ways for the owners of capital to squeeze workers and thus reduce the returns to productive work and the output of the economy. The markdown on wages caused by monopsony and the markup on prices caused by monopoly are akin to taxes: payments that ordinary people must pay in order to go about their daily life as producers and consumers. However, the payments go not to governments to fund programs, but to firms and, ultimately, investors. And the payments do not spur investment and raise economic growth because they depend in the first place on the willingness of managers to leave capital idle to obtain market power, while driving workers out of the workforce and onto taxpayer-financed relief programs.

#### 6---Consolidation is bad.

Mike Paoli, 21. retired Air Force officer and former overseas air station commander, studied national security issues at the Air War College and nuclear reactor technology at MIT. “Defense Industry Monopolies May Pose the Biggest Danger”. Real Clear Markets. 2-19-21. https://www.realclearmarkets.com/articles/2021/02/19/defense\_industry\_monopolies\_may\_pose\_the\_biggest\_danger\_660955.html

Yet as bad as they seem in Big Tech, I believe defense industry monopolies may be even more dangerous to the country. That’s because our military acquisitions process works best when various companies compete to research, design and produce the world’s best weapons systems for our warfighters. When just one company can run the table on the others, bad things are bound to happen. Costs go up, and reliability goes down. A few people profit mightily. The rest are out of luck. It’s physics. As a retired Air Force officer who once ran the Air Force press desk at the Pentagon, I’ve seen how the acquisitions system works from the inside. Which is why I was dismayed to learn recently that one great American company is trying to corner the market on missile propulsion at the expense of several other great American companies --literally one of the key components of our defense industry writ large. Last December, Lockheed Martin announced a bold [plan to acquire](https://spacenews.com/lockheed-martin-to-acquire-aerojet-rocketdyne-for-4-4-billion/) Aerojet Rocketdyne, our nation’s only independent rocket propulsion manufacturer, for $4.4 billion. Lockheed Martin’s [press release](https://news.lockheedmartin.com/2020-12-20-Lockheed-Martin-to-Acquire-Aerojet-Rocketdyne-Strengthening-Position-as-Leading-Provider-of-Technologies-to-Deter-Threats-and-Help-Secure-the-United-States-and-its-Allies) says the transaction strengthens its “support of critical U.S. and allied security missions and retains national leadership in space and hypersonic technology.” Just one problem. Aerojet Rocketdyne, a.k.a.[Rocket.com](https://www.rocket.com/), a California-based company with 5,000 employees, has also partnered with four other major U.S. defense contractors on rocket and missile propulsion systems and is the last independent Solid Rocket Motor provider in the country. If successfully acquired by Lockheed Martin, the other four would either have look to foreign companies overseas to find suitable replacements -- or get out of the missile business entirely. That’s anti-competitive and a national security risk. Now, it’s a good thing the U.S. is investing in space and hypersonic technology, imperative actually. Especially since rival major powers China and Russia are making progress as we lag behind. [Russia claims](https://www.reuters.com/article/us-russia-nuclear-missiles/russia-says-it-has-deployed-first-hypersonic-nuclear-capable-missiles-idUSKBN1YV1M1) to have already deployed hypersonic missiles with troops. Our own [Missile Defense Agency said](https://www.newsweek.com/pentagon-orders-hypersonic-missile-trackers-russia-china-arms-race-1564754) the characteristics of such missiles, flying at over Mach 5, or about 3,800 miles an hour, “makes them challenging targets for our current missile defense systems.” So yes, we must invest. Though doing so with just one company solely to benefit its own “vertical integration” of missile systems is overall counterproductive for the U.S. Fortunately, this is not a done deal. At least not yet. The Defense Department and Federal Trade Commission still have to approve the merger. During his [Senate confirmation hearing](https://www.armed-services.senate.gov/imo/media/doc/Austin_APQs_01-19-21.pdf) in January, now confirmed Secretary of Defense Lloyd Austin noted how “a number of weaknesses exist in the defense industrial base” which include “reliance on sole or single source suppliers, reliance on foreign sources (including adversarial sources), and vulnerabilities to predatory and adversarial capital investments…” Bingo. Sounds like he just described this proposed merger. But this type of thing has been on the Pentagon’s radar awhile, and rightly so. At a [2015 press briefing](https://insidedefense.com/daily-news/concerned-about-defense-industry-consolidation-dod-seeks-congressional-help-updated), then-Defense Secretary Ash Carter said it is “important to avoid excessive consolidation in the defense industry to the point where we did not have multiple vendors who could compete with one another.” And the FTC is also aware of the dangers. In June 2020, it released [new guidelines with DoD](https://www.ftc.gov/news-events/press-releases/2020/06/ftc-doj-issue-antitrust-guidelines-evaluating-vertical-mergers) for evaluating vertical mergers, calling them “an important step forward in maintaining vigorous anti-trust enforcement” and that they “reaffirm our commitment to challenge vertical mergers that are anti-competitive and would harm American consumers.” Such a proposed merger between Lockheed Martin and Aerodyne would create a mega-company undermining America’s industrial defense base -- one completely at odds with existing FTC-DoD guidelines. Let’s hope government officials study this carefully and do the right thing for our fellow Americans.

#### 7---U.S. tech leadership is high and resilient.

Gad Levanon 20. Forbes manufacturing contributor. “Reports Of US Decline Are Greatly Exaggerated.” 08/27/20. <https://www.forbes.com/sites/gadlevanon/2020/08/27/reports-of-us-decline-are-greatly-exaggerated/?sh=6253227b26f8>

Despite what many suspect is an eroding US global standing, 2020 may be remembered as the year when the US became even more globally dominant economically. Why? The tech sector’s share of the US economy is much larger than in most countries. And the pandemic-driven recession has greatly accelerated the shift to online activity and digital transformation by businesses and consumers, which would otherwise have taken years. That lead to faster growth in the global demand for technology. In addition, the US is especially dominant in the tech industries that are likely to grow the fastest in the coming years. Stock prices certainly support this story. The S&P 500 is already above pre-pandemic highs despite the deepest recession in 80 years, and most of the stock prices’ strength comes from tech sector. The companies that have seen the strongest gains since the pandemic focus on online shopping and payments, cloud computing services, cyber security, business related software, social media, online advertisement, and on-demand entertainment content. Stock prices are volatile and so are a treacherous guide for predicting the future, but there is a plausible explanation for the large tech gains – and why they might last. [Chart omitted] There are several objective and subjective reasons for why the US is so successful in technology compared with other countries. It has: 1The best universities, which attract many of the best students from all over the world – most of whom tend to stay in the US after completing their studies 2A large inflow of experienced talent from other countries 3 Unrivaled access to venture capital 4 Fluency in English, the global language in both business-dealing and content 5 An economy big enough to make achieving scale relatively easy 6 Silicon Valley, the home and heart of the tech revolution 7 A culture that welcomes innovation and disruption and strongly encourages entrepreneurial behavior Given these factors, US tech leadership should continue. What about the competition? One factor helping the US stand out is the weakness of the European tech sector. The market cap of the largest European tech company, SAP SAP -0.3%, is about one-tenth of Apple AAPL +1.6%’s. In other sophisticated industries like pharmaceuticals, motor vehicles and aircraft, European companies are strong competitors to their US counterparts. Europe’s relative technology weakness is perhaps as unusual as the US strength in the sector, and is only reinforced by the fact that US technology companies are already big players in European economies. Most of the top tech companies from East Asia – places like Japan, Taiwan and South Korea – are in hardware and semiconductors manufacturing. They are serious competitors in these areas, but these technology sectors are not growing as quickly. No discussion of the future of technology is complete without China. The Chinese internet companies are huge and growing rapidly, but their ability to expand beyond China and its periphery is questionable. In almost all sophisticated industries, Chinese companies are not yet major players in Western economies. Also, recent events suggest that Western countries will be more cautious in dealing with China, perhaps limiting its expansion. The latest developments with Huawei and TikTok are good examples. In addition, US companies are slowly moving their supply chain elsewhere, further weakening China. So, the technology sector will perform well in the next several years, benefiting countries that are strong in that area. The US, more than any other country, has a large and successful tech sector that seems to be especially concentrated in the fastest-growing tech industries. What does this mean for the US economy overall? First, it is important to mention that the boost the US is getting from its tech sector has been larger than what most other advanced economies have gotten for quite a while, and is one of the reasons the US has been growing faster than them in recent years. But now, this trend is likely to accelerate. Here is some back of the envelope math for the difference between the technology sector’s contribution to GDP growth in the US versus a typical advanced economy: Suppose in the US the tech sector is 12 percent of GDP and is growing at 10 percent a year. In another typical advanced economy the tech sector is 7 percent of GDP and is growing at 5 percent a year. That means that the annual contribution to GDP from the tech sector is 1.2 percent for the US versus 0.35 percent for the other country. That is 0.85 percent faster growth for the US every year. The net effect may be smaller because some of the growth in tech companies come at the expanse of companies from other sectors. But when the average annual GDP growth rate is 1.5-2 percent in advanced economies, even a 0.5 percent a year difference is meaningful. The gains from the rapid growth in technology would disproportionately go to tech companies’ owners and workers. As most of these are high earners, this trend is likely to increase income inequality. But some of the gains will spread more widely. After all, owners and workers, and the companies themselves, spend a large share of their income in the communities they live and operate in. It will also increase geographic inequalities. Not surprisingly, within the US, areas close to Silicon Valley benefited the most from the technology demand-surge. Between 2013-2018, among the 382 metro areas in the US, San Jose and San Francisco metro areas had the fastest growth in personal income per-capita. During that time, personal income per-capita in the San Jose Metro area rose by 48 percent, more than twice as fast as the national rate (22 percent). The surrounding metro areas, Napa, Santa Rosa-Petaluma, Santa Cruz-Watsonville, Stockton, Vallejo, were all ranked in the top 40. Seattle, another technology Hub, is ranked 13. All of these data points add up to an enduring strength. Despite concerns about US’s standing in the world, its tech sector may keep it at the forefront of the global economy in the foreseeable future.

## 1ar

### Inequality adv---1ar

#### a COVID depression ensures escalation.

Michael Tkacik 20, professor of government and director of the School of Honors at Stephen F Austin State University in Texas, “Ingredients in place for new great power war,” Asia Times, 4-21-2020, https://asiatimes.com/2020/04/ingredients-in-place-for-new-great-power-war/

The events leading to war in 1939 included a sharp division between the wealthy and everyone else, economic catastrophe in the Great Depression, sharp reductions in global trade, a breakdown in international cooperation, and the end of liberal governance in much of the world. Once again, these variables are present. Even before the Covid-19 pandemic, trade was decreasing and beggar-thy-neighbor economic policies had become the norm. It might be tempting to place this blame on Trump, but he was elected by people in his country who have suffered 40 years of criminal economic competition from China. It is no wonder they elected Trump and it is no wonder he undermined a global trade system that has failed America’s working class. Similarly, evidence of the breakdown of international cooperation and liberalism are everywhere. The world is unable to deal with the existential threat of climate change. Authoritarian regimes have seats on the UN Human Rights Council. There is a great and increasing gap between the wealthy and everyone else, a new Gilded Age. Liberalism, unable to cope, is in retreat everywhere, from the US and the UK to fledgling democracies in Eastern Europe and Latin America. Our world is gravely ill. Pandemic Into this morass we stir a global pandemic, with its origin in a corrupt, authoritarian state that is hostile to openness, human dignity and truth. That China denied and then exported the pandemic was as predictable as it is lamentable. The pandemic will bring a global economic depression, the only variable from World War II not present today. We should expect more governments to fall, we should expect liberalism to retreat further, and we should expect increased nationalism and violence upon our own species. In short, we are in for dark days. Dictators attempt to divert the attention of their people from corruption and injustice by seeking external enemies. Wars will therefore increase, and status quo powers such as the United States may attempt to defend a crumbling system. The chance of war between China and the United States has increased dramatically because almost all of the structural variables today point toward war. Both World War I and II were avoidable because different variables were present. Consequently, had skilled leadership been present, each war might have been avoided by correctly diagnosing the causes of the impending crises. That the wars were not avoided does not mean they could not have been; it simply means leadership was not up to the task. But today the causes of both of those wars have been combined in a single cauldron. So it is reasonable to ask, even with good leadership (of which there is no doubt we are lacking), can great-power war be avoided?

#### Nuclear war causes extinction.

Joseph **Trevithick and** Tyler **Rogoway 19**. Military Analyst, MA in Conflict Resolution from Georgetown, BA in the History and Policy of IR from Carnegie-Mellon. Defense Journalist @ The Drive. 2-27-2019. “Yes, India and Pakistan Could End the World As We Know It Through A Nuclear Exchange.” *The Drive*. <https://www.thedrive.com/the-war-zone/26674/yes-india-and-pakistan-could-end-the-world-as-we-know-it-through-a-nuclear-exchange>. <3 Rafa

A global threat India and Pakistan's nuclear arsenals are tiny compared to those of the United States and Russia, and these weapons are focused primarily on deterring each other, but that does **not mean** they're **purely regional** threats. Unlike conventional weapons, nuclear weapons create **lasting** and **far-reaching** effects that scientists have posited could **upend life on Earth** if warring parties were to use them in sufficient numbers. In 2012, Alan Robock, a distinguished professor in the Department of Environmental Sciences and Associate Director of the Center for Environmental Prediction at Rutgers University, and Owen Brian Toon, a professor in the Department of Atmospheric and Oceanic Sciences and a research associate at the Laboratory for Atmospheric and Space Physics at the University of Colorado, Boulder, argued that it might not take a **large amount** of nuclear weapons to create a scenario commonly known as "**Nuclear Winter**." In general, this hypothesized event occurs when smoke and soot from nuclear explosions block significant amounts of sunlight from reaching the earth's surface, leading to a precipitous drop in temperatures that results in mass **crop failure** and **widespread famine**. Robcock and Toon summarized their findings, which were based in part on their previous work, in an article in the Bulletin of The Atomic Scientists, writing: "Even a '**small**' nuclear war between **India** and **Pakistan**, with each country detonating **50 Hiroshima-size** atom bombs – only about **0.03 percent** of the global nuclear arsenal's explosive power – as airbursts in urban areas, could produce so much smoke that temperatures would fall below those of the Little **Ice Age** of the fourteenth to nineteenth centuries, shortening the growing season around the world and threatening the global food supply. Furthermore, there would be massive **ozone depletion**, allowing more ultraviolet radiation to reach Earth's surface. Recent studies predict that agricultural production in parts of the United States and China would decline by about 20 percent for four years, and by 10 percent for a decade. The bomb the United States dropped on Hiroshima Japan, known as Little Boy, was an inefficient and essentially experimental design with a yield of around 15 kilotons. The reported results from Indian and Pakistani **nuclear testing** indicate that both countries can **meet this threshold** and both countries' weapons programs have almost certainly matured in the decades since. In previous studies, Robcock, working with others, postulated that temperature changes could begin within 10 days of a limited nuclear exchange and the effects from the detonations of 100 nuclear weapons in the 15-kiloton class would directly result in the deaths of at least 20 million people. The **second order** impacts would be even worse in the years that followed. In 2014, Michael Mills and Julia Lee-Taylor, both then working at the federally-funded National Center for Atmospheric Research's (NCAR) Earth System Laboratory, authored another paper with Robcock and Toon. This study concluded again that detonation of 100 15-kiloton yield bombs in a **purely regional** conflict would result in "multi-decadal **global cooling**" and "would put significant pressures on global food supplies and could trigger a global **nuclear famine**." It is important to note that critics have questioned whether the Nuclear Winter concept relies on too many assumptions and would ever actually occur. At the center of many of these rebuttals are debates about whether the nuclear explosions would truly create the amount of smoke and soot necessary for major climate change, as well as the specific conditions for those particles to remain in the atmosphere for a prolonged period of time. The studies here do indicate significant impacts based on a relatively limited number of nuclear detonations of smaller yield devices, though. But even if the impacts are less pronounced than projected in this particular scenario, they could be far more severe if India and Pakistan were to use a larger number weapons and/or ones of **higher yields**, which both belligerents readily have. In addition, Nuclear Winter is just **one** of the potential things that might happen following a nuclear exchange between the longtime foes. A detonation of **dozens** of nuclear weapons, **even small ones**, would throw hazardous nuclear fallout **into the air** that, depending on the weather pattern, could **carry** that **material** far and wide, causing both near- and short-term health impacts. The various ground zeroes themselves would be irritated and potentially hazardous for many years to come. Depending on where the detonations occur, a nuclear exchange could potentially cut people off from critical **water** and **food** supplies, putting increased and potentially unsustainable strains on uncontaminated areas. After the Chernobyl nuclear power plant, situated in Ukraine, melted down and exploded in 1986, authorities established a 1,000 square mile restricted access "exclusion zone" that remains in place today. There would also be a major danger of **second-order** "spillover" **effects**, as individuals fled affected areas, putting **economic** and **political strains** on neighboring regions. This could **infl**

**ame** existing tensions **not directly related** to the inter-state conflict between India or Pakistan or lead to all new and potentially **violent competition** for what might already be **limited resources**. India has already threatened to **weaponize water** access in its latest spat with the Pakistanis. Any serious impacts on food and water supplies, or other economic upheavals as a direct or indirect result of the conflict, would have **cascading impact** across **South Asia** and beyond, as well. The very threat of a potential India-Pakistan war of any kind already caused some negative reactions in regional financial markets. Those markets would **certainly collapse** after an unprecedented nuclear exchange actually occurred, and that is before the long-term physical impacts of such an event would even manifest themselves. Overall, we are talking about a sudden and dramatic geopolitical, financial, and environmental shift that would change our reality in a matter of hours. Even then, the darkness, both figuratively and literally, that could propagate over the weeks, months, and years would be far more damaging. How great is the risk? So far, India and Pakistan have not made any clear indications that the fighting is close to crossing their nuclear thresholds. Pakistan's warnings about the risks of escalation seem more calculated to try and prompt India to back down. India itself has a so-called "**no first use**" policy, which means it has publicly pledged to use its nuclear weapons only in retaliation to a nuclear strike. However, experts have increasingly **called into question** whether this is truly the case and whether India might be developing **delivery systems** more suited to a **first strike** should there be a need to shift policies. Pakistan, however, does not have a no first use policy and has insisted on its right to employ **nuclear weapons** to defend itself even in the face of **purely conventional** threat. Pakistani officials have, in the past, specifically cited this policy as way of **deterring India**, which has a much larger and in some cases more advanced conventional force, and preventing larger wars. The concern, then, is that this policy appears to have failed, at least to some degree, with **India's strike** on undisputed **Pakistani territory** on Feb. 26, 2019. India, however, did not target Pakistani forces in that instance and exchanges between the two countries have been limited, at least so far, to the disputed Jammu and Kashmir region, where violent skirmishes occur **semi-regularly** without precipitating a larger confrontation. We can only hope that the two countries will find a diplomatic solution to this latest conflict and avoid any further escalation. If things were to **spiral out of control** and lead to the use of **nuclear weapons**, it would be something that would threaten **all of humanity**.

#### Trainer’s “peaks” are always wrong

Strouts 14 (Permaculture teacher @ Permaculture Ireland, teacher @ Kinsale College 2005 – 2013, “Renewable Energy Cannot Sustain a Consumer Society,” January 17, 2014, http://skepteco.wordpress.com/2014/01/17/renewable-energy-cannot-sustain-a-consumer-society/)

Another writer firmly in the “civilisation-is-bad-and- we- should-return to simpler-lifestyles” camp but who could see through the myth of replacing fossil fuels with wind and solar power is Ted Trainer. Below is a review of his book on the subject which formed one of my earliest Zone5 posts. My views on the false claims made for renewables are one of the things that have not changed since those days. They have become more informed: in particular, I would refer to Colin McInnes’ analysis showing the importance of energy density: fossil fuels and nuclear power are two- or three orders of magnitude more energy dense than diffuse and unreliable wind and solar power. If we look at the world leader in transition to renewables- Germany with its Energiewende- we can see even from a recent favorable report how this translates into real practical obstacles: firstly, to reach 100% renewables (including biomass and storage of surplus power as gas through electrolysis and methanation- an as yet hardly developed technology) is predicated on a 50% reduction in total energy consumption- almost as unrealistic as Trainer’s views; and apart from anything else, includes covering fully half of Germany’s entire arable land in solar cells. An interesting thought experiment perhaps, but hardly practical. Where I differ with Trainer today of course is a)his assumption that such a powerdown scenario is necessary or desirable; and b) his views on “peak uranium” should nuclear power be pursued: predictions of “peak” are nearly always wrong because they underestimate the development of new technology, for new resource discoveries, new extraction technologies, and new efficiencies in end-use: fast-breeder reactors which are in the pipe-line are able to extract more than 90% of the energy from uranium fuel rods, as opposed to just 1-2% from current models. And after Uranium of course, there is Thorium. I would also be strongly critical of his advocacy of “the Simpler Way”. There is no way to objectively differentiate “needs” from “wants”, and attempts to lay down the law and tell everyone else what constitutes “enough” seem paternalistic and oppressive. They are also based on deeply flawed Limits to Growth thinking, creating a sort of scarcity-consciousness which I feel all too often leads to a self-serving romanticizing of poverty. I also completely reject his idea that technology s not key- it is not the only crucial element, but for the billions of urban dwellers to have good lives into the future will certainly need ongoing technological innovation, as will farming and food production. The moral approach to addressing poverty and inequality will certainly involve more energy consumption, not less.

#### AND

McAffee 20 -- Andew McAffee, cofounder and codirector of the MIT Initiative on the Digital Economy at the MIT Sloan School of Management, former professor at Harvard Business School and fellow at Harvard’s Berkman Center for Internet and Society. [Why Degrowth Is the Worst Idea on the Planet, 10-6-20, <https://www.wired.com/story/opinion-why-degrowth-is-the-worst-idea-on-the-planet/>]

[Title: Why Degrowth Is the Worst Idea on the Planet] FOR HALF A century, we've been told that we had to embrace degrowth in order to save our planet. We haven't listened. Around the world, human populations and economies have continued to grow at rates that are virtually unprecedented in the history of our species. Over that same span, an unexpected and encouraging pattern has emerged: The world's richest countries have learned how to reduce their footprint on Earth. They're polluting less, using less land and water, consuming smaller amounts of important natural resources, and doing better in many other ways. Some of these trends are also now visible in less affluent countries. However, many in the degrowth movement seem to have trouble taking yes for an answer. The claims I just made are widely resisted or ignored. Some say they’ve been debunked. Of course, debate over empirical claims like these is normal and healthy. Our impact on our planet is hugely important. But something less healthy is at work here. As Upton Sinclair put it, “It is difficult to get a man to understand something when his salary depends upon his not understanding it.” Some voices in the conversation about the environment seem wedded to the idea that degrowth is necessary, and they are unwilling or unable to walk away from it, no matter the evidence. But evidence remains a powerful way to persuade the persuadable. The one thing everyone agrees on is that the last 50 years have been a period of growth, not degrowth. In fact, growth has never been faster, except for the 25-year rebuilding period after World War II. The population and economic growth rates of the past half-century are remarkably fast by historical standards. Between 1800 and 1945, for example, the world’s economy grew less than 1.5 percent per year, on average. Between 1970 and 2019, that average increased to almost 3.5 percent. It's natural to assume that, as this growth continued, every nation’s planetary footprint would only increase. After all, as people become more numerous and prosperous they consume more, and producing all the goods and services they consume uses up resources, takes over ecosystems, and generates pollution. The logic seems ironclad that our gains have to be the environment’s losses. Easing Pollution, Not Exporting It In some important areas, however, a very different pattern emerged after 1970: Growth continued, but environmental harm decreased. This decoupling occurred first with pollution, and first in the rich world. In the US, for example, aggregate levels of six common air pollutants have declined by 77 percent, even as gross domestic product increased by 285 percent and population by 60 percent. In the UK, annual tonnage of particulate emissions dropped by more than 75 percent between 1970 and 2016, and of the main polluting chemicals by about 85 percent. Similar gains are common across the highest-income countries. How were these reductions achieved? The two possibilities are cleanup and offshoring. Either rich countries figured out how to reduce their “air pollution per dollar” so much that overall pollution went down even as their economies grew, or they sent so much of their dirty production overseas that the air at home got cleaner. The first of these paths reduces the total burden of human-caused pollution; the second just rearranges it. The evidence is overwhelming that rich countries cleaned up their air pollution much more than they outsourced it. For one, a great deal of air pollution comes from highway vehicles and power plants, and rich countries haven’t outsourced driving and generating electricity to low-income ones. In fact, high-income countries haven't even offshored most of their industry. The US and UK both manufacture more than they did 50 years ago (at least until the Covid-19 pandemic sharply reduced output), and Germany has been a net exporter since 2000 while continuing to drive down air pollution. The rest of the world has been exporting its manufacturing pollution to Germany (to use degrowthers’ phrasing), yet Germans are breathing clea

ner air than they were 20 years ago. Rich countries have reduced their air pollution not by embracing degrowth or offshoring, but instead by enacting and enforcing smart regulation. As economists Joseph Shapiro and Reed Walker concluded in a 2018 study about the US, “changes in environmental regulation, rather than changes in productivity and trade, account for most of the emissions reductions.” Research about the cleanup of US waters also concludes that well-designed and enforced regulations have successfully reduced pollution. It is true that the US and other rich countries now import lots of products from China and other nations with higher pollution levels. But if there were no international trade at all, and rich countries had to rely exclusively on their domestic industries to make everything they consume, they’d still have much cleaner air and water than they did 50 years ago. As a 2004 Advances in Economic Analysis and Policy study summarized: “We find no evidence that domestic production of pollution-intensive goods in the US is being replaced by imports from overseas.” The rich world’s success at decoupling growth from pollution is an inconvenient fact for degrowthers. Even more inconvenient is China's recent success at doing the same. China’s export-led, manufacturing-heavy economy has been growing at meteoric rates, but between 2013 and 2017 air pollution in densely populated areas declined by more than 30 percent. Here again the government mandated and monitored pollution declines and so decoupled growth from an important category of environmental harm. Prosperity Bends the Curve China's progress with air pollution is heartening, but it's not surprising to most economists. It's a clear example of the environmental Kuznets curve (EKC) in action. Named for the economist Simon Kuznets, EKC posits a relationship between a country's affluence and the condition of its environment. As GDP per capita rises from an initial low level, so too does environmental damage; but as affluence continues to increase, the harms level off and then start to decline. The EKC is clearly visible in the pollution histories of today's rich countries, and it's now taking shape in China and elsewhere. Also consider air pollution death rates around the world. As the invaluable website Our World in Data puts it, “Rates have typically fallen across high-income countries: almost everywhere in Europe, but also in Canada, the United States, Australia, New Zealand, Japan, Israel and South Korea and other countries. But rates have also fallen across upper-middle income countries too, including China and Brazil. In low and lower-middle income countries, rates have increased over this period.” The EKC is a direct refutation of a core idea of degrowth: that environmental harms must always rise as populations and economies do. It's not surprising that today's degrowth advocates rarely discuss the large reductions in air and water pollution that have accompanied higher prosperity in so many places around the world. Instead, degrowthers now focus heavily on one kind of pollution: greenhouse gas emissions. The claims made are familiar ones: that any apparent reductions in greenhouse gas emissions in rich countries are due to offshoring rather than actual decarbonization. Thanks to the Global Carbon Project, we can see if this is the case. GCP has calculated “consumption-based emissions” for many countries going back to 1990, taking into account imports and exports, yielding the greenhouse gas emissions embodied in all the goods and services consumed in each country each year. For several of the world's richest countries, including Germany, Italy, France, the UK, and the US, graphs of consumption-based carbon emissions follow the familiar EKC. The US, for example, has 22reduced its total (not per capita) consumption-based CO2 emissions by more than 13 percent since 2007. These reductions are not mainly due to enhanced regulation. Instead, they've come about because of a combination of tech progress and market forces. Solar and wind power have become much cheaper in recent years and have displaced coal for electricity generation. Natural gas, which when burned emits fewer greenhouse gases per unit of energy than does coal (even after taking methane leakage into account), has also become much cheaper and more abundant in the US as a result of the fracking revolution. To ensure that these greenhouse gas declines continue to spread and accelerate, we should apply the lessons we've learned from previous pollution reduction success. In particular, we should make it expensive to emit carbon, then watch the emitters work hard to reduce this expense. The best way to do this is with a carbon dividend, which is a tax on carbon emissions where the revenues are not kept by the government but instead are rebated to people as a dividend. William Nordhaus won the 2018 Nobel Prize in economics in part for his work on the carbon dividend, and an open letter advocating its implementation in the US has been signed by more than 3,500 economists. It's an idea whose time has come. How We Learned to Lighten Up Tech progress and price pressure aren't just leading to the demise of coal. They're also causing us to exploit the planet less in many other important ways, even as growth continues. In other words, EKCs are not just about pollution any more. A good place to start examining this broad phenomenon of getting more from less is US agriculture, where we have decades of data on both outputs—crop tonnage—and the key inputs of cropland, water, and fertilizer. Domestic crop tonnage has risen steadily over the years and in 2015 was more than 55 percent higher than in 1980. Over that same period, though, total water used for irrigation declined by 18 percent, total cropland by more than 7 percent. That is, over that 35-year period, US crop agriculture increased its output by more than half while giving an area of land larger than Indiana back to nature and eventually using a Lake Champlain less water each year. This was not accomplished by increasing fertilizer use; total US fertilizer consumption in 2014 (the most recent year for which data are available) was within 2 percent of its 1980 level. The three main fertilizers of nitrogen, potassium, and phosphorus (NKP) are an interesting case study. Their total US consumption (once other uses in addition to agriculture are taken into account) has declined by 23 percent since 1980, according to the United States Geological Survey. Yet some within the degrowth movement find ways to argue that these declines are also an illusion. These materials thus serve to clearly illustrate the differences in methodology, evidence, and worldview between ecomodernists like myself and degrowthers. The USGS tracks annual domestic production, imports, and exports of NKP and uses these figures to calculate “apparent consumption” each year. Consumption of each of the three resources has declined by 16 percent or more from their peaks, which occurred no later than 1998. This seems like a clear and convincing example of dematerialization—getting more output from fewer material inputs. As I argue in my book More From Less, dematerialization doesn’t happen for any complicated or idiosyncratic reason. It happens because resources cost money that companies would rather not spend, and tech progress keeps opening up new ways to produce more output (like crops) while spending less on material inputs (like fertilizers). Modern digital technologies are so good at helping producers get more from less that they're now allowing the US and other technologically sophisticated countries to use less in total of important materials like NKP. Forest products provide another clear example of dematerialization in the US. Total annual domestic consumption of paper and paperboard peaked in 1999, and of timber in 2002. Both totals have since declined by more than 20 percent. Could these be mirages caused by offshoring that’s not properly captured? That’s highly unlikely, as the country is now onshoring more than it’s offshoring. The US has been a net exporter of forest products since 2009 and is now the world’s largest exporter of these materials. Is the US economy also dematerializing its use of metals? Probably, but it’s hard to say for sure. The USGS tallies do show dematerialization in steel, aluminum, copper, and other important metals. But these figures don’t include the metals contained in imports of finished goods like cars and computers. America is a net importer of manufactured goods, so it could be that we’re using more metal year after year, but that much of this consumption is “hidden” from official statistics because of imports of heavy, complex products. However, my estimates indicate that this is extremely unlikely and that the country is in fact now reducing its overall consumption of metals. Constructing a Weak Argument Degrowth exponent Jason Hickel responds to this broad evidence of dematerialization by making once again the shopworn argument that there are no real environmental gains; there’s only globalization of harms. Hickel has argued repeatedly that once offshoring is properly taken into account, dematerialization vanishes. How can this be, when tallies take into account imports and exports of raw materials like NKP, timber, and paper? Because, he contends, they don't take into account the true “material footprint” of production around the world. At this point the degrowth argument departs from reality. I mean literally. As “The Material Footprint of Nations” (the main paper Hickel cites) states, material footprint measures do “not record the actual physical movement of materials within and among countries.” Instead, they’re derived from a “calculation framework [that] … enumerates the link between the beginning of a production chain (where raw materials are extracted from the natural environment) and its end.” Material footprint models estimate the total weight of all the materials disturbed by humans around the world as they produce the goods they eventually consume. All of the ores mined to make metal, the rock quarried to make gravel, the sand scooped up to make glass and microchips—all of these are estimated by country by year in the material footprint calculation framework. A nation’s material footprint, then, is always higher than its direct material consumption (DMC). This is straightforward enough. What’s puzzling is that according to “The Material Footprint of Nations,” some rich countries are seeing their footprint go up even as their consumption goes down. The paper shows that many countries are now dematerializing. DMC has been trending downward for some time in the US, UK, and Japan and may recently have peaked for the European Union and OECD as a whole. Yet in all these cases, the material footprint continues to rise. How can this be? It’s not because the material footprint models do a better job than the USGS of accounting for the metals and other materials in finished goods imports. The technical annex for the global material flows database notes that, as is the case with the USGS tallies, “complex manufactured items are largely excluded.” Instead, the paper notes, “the main reason in most cases was increased indirect use of (dependency on) construction materials.” This is problematic, because those materials are so poorly tracked. As the appendix states, “Many countries have no data on extraction of non-metallic minerals primarily used for construction … When they are available, they are often unreliable, partial, and underreported.” It’s a poor strategy to use sparse, low-quality data to overturn conclusions based on uniform, high-quality data, yet this is what Hickel is doing when he argues that material footprint calculations show dematerialization is an illusion. There’s one other serious problem with this argument. It’s based largely on the estimated “raw material equivalents” of Chinese exports of construction minerals, yet China is not at all a big exporter of these minerals. Instead, China’s main exports are electrical and mechanical machinery, plastics, furniture, apparel, and vehicles. None of these contain a lot of sand, gravel, stone, or clay. So then how do such huge quantities of these and other construction minerals end up somehow being counted among China’s exports? Because China is building a lot of factories, railroads, highways, and other industrial infrastructure each year. The materials footprint calculation framework estimates how much tonnage of construction minerals all this building requires, then allocates about one third of this tonnage to exports. So by this logic, the smartphones and solar panels the US imported from China in, say, 2018 “contain” some of the stone and gravel used to build up China that year. By that same logic, if my neighbors bring me a cake the same year they renovate their house, then my consumption of lumber, drywall, and copper pipe goes up as soon as I have a slice. Hickel doesn’t stand on any firmer ground when he moves from conclusions to recommendations. He has often claimed that 50 billion tons is the maximum weight of global resource extraction that Earth can sustainably handle and that we’re already well past this limit. In the face of this alleged crisis, he maintains that “the only fail-safe strategy is to impose legally binding caps on resource use and gradually ratchet it back down to safe levels.” However, the paper he cites to support his views contains a frank admission: “There is still no hard scientific evidence of causal relationship between human-induced resource flows and the possible breakdown of life-supporting functions at continental or global scale from which … targets [like a 50 billion ton limit] could directly be derived.” Before taking the unprecedented step of setting up a central resource planning bureaucracy, it doesn’t seem like too much to ask for hard scientific evidence that it’s actually necessary. Let’s Keep Climbing Throughout our history, we humans have been climbing a difficult path toward longer, healthier, more prosperous lives. As we climbed that path, we turned the environment around it brown and gray. Our mania for growth was in many ways bad news for the planet we all live on. Recently, however, we have figured out how to make our path a green one, how to continue to grow while reducing our impact on Earth. The world’s richest countries are also putting more land and water under conservation, reintroducing native species into ecosystems from which they had been hunted into oblivion, and improving Earth in many other ways. For reasons that I don't understand well, and that I understand less the more evidence I look at, degrowthers want to make us turn around and start walking back down the path, away from higher prosperity. Their vision seems to be one of a centrally planned, ever-deepening recession throughout the rich world for the sake of the environment. Thanks to Covid-19, we have an inkling of how this would feel. A “degrowth recession” wouldn't have the virus’ deaths and sickness, and it wouldn't require us to practice social distancing. But it would have all the economic contractions’ job losses, business closures, mortgage defaults, and other hardships and uncertainties. And it would have them without end—after all, growth can't be allowed to restart. Corporate and government revenue would decrease permanently, and therefore so would innovation and R&D. How many of us would be willing to accept all of this in exchange for somewhat less pollution and resource use? To sharpen the question, how many of us would be willing to accept this recession if it wasn’t necessary—if it were clear that we could get environmental improvements while continuing to grow and prosper? The ecomodernist argument is that that is in fact clear. Unlike the degrowth argument, it's supported by a great deal of evidence. What's at least important is that it will be supported by a great deal of the world's people, who will eagerly sign up to climb our new green path to prosperity.

#### The most comprehensive studies prove that financialization has heterogenous economic impacts---it strengthens developing economies and can’t individually tank developed economies.

Agne Setikiene and Mindaugas Butkus 21. Institute of Regional Development, Vilnius University Siauliai Academy. Associated Professor / Senior Researcher at the Institute of Regional Development. “The Heterogeneous Impact of Financialisation on Economic Growth in the Long Run” *Journal of Risk and Financial Management*, 14(5), 209. https://www.mdpi.com/1911-8074/14/5/209/htm

The study results show that more developed countries, regardless of their institutional quality, most likely experience a negative effect of financialisation on long-run economic growth. However, in countries with a lower level of development, we, in the majority of cases, find a statistically significant positive effect. The fact that the effect of financialisation, mediated by institutional quality, level of development, and interaction using the same proxies, differs across countries, shows that the effect on long-run growth is heterogeneous and depends on variables used to proxy the country’s development level and institutional quality. This finding, to some extent, explains the ambiguous conclusions of previous research.

4. Conclusions

Though there have been many attempts to study the relationship between financialisation and economic growth, this study contributes to the literature by examining the heterogeneous impact of financialisation on long-run economic growth. To the best of our knowledge, there is no other study in which the effect of financialisation on economic growth is examined by considering two simultaneous mediators and their interaction.

#### No impact to boom and bust

Donald **Kohn 15**, Senior Fellow in Economic Studies at Brookings, 1/30/15, U.S. Monetary Policy: Moving Toward the Exit in an Interconnected Global Economy, www.brookings.edu/research/speeches/2015/01/30-us-monetary-policy-global-economy-kohn

The global financial authorities have made **major strides in making their systems more resilient** to unexpected developments, in particular with **higher capital and greater liquidity** for banks and bank holding companies. In several jurisdictions, banks have been **stress tested** with scenarios that included rising rates. Moreover, we’ve seen several episodes in which volatility and risk spreads have risen, including the summer of 2013 during the so-called taper tantrum, and in the past few months amid mounting uncertainty about global economic prospects, plunging oil prices, growing political and economic tensions in the euro area, and strong monetary policy responses. Although there’s been some fallout from these financial market developments, **none has threatened financial stability.**

#### no stranded assets

Conca 17 (James, scientist in the field of the earth and environmental sciences for 33 years, specializing in geologic disposal of nuclear waste, energy-related research, planetary surface processes, radiobiology and shielding for space colonies, subsurface transport and environmental clean-up of heavy metals. I am a Trustee of the Herbert M. Parker Foundation, Adjunct at WSU, an Affiliate Scientist at LANL and consult on strategic planning for the DOE, EPA/State environmental agencies, and industry including companies that own nuclear, hydro, wind farms, large solar arrays, coal and gas plants. I also consult for EPA/State environmental agencies and industry on clean-up of heavy metals from soil and water. For over 25 years I have been a member of Sierra Club, Greenpeace, the NRDC, the Environmental Defense Fund and many others, as well as professional societies including the America Nuclear Society, the American Chemical Society, the Geological Society of America and the American Association of Petroleum Geologists. “No Peak Oil For America Or The World.” MAR 2, 2017 https://www.forbes.com/sites/jamesconca/2017/03/02/no-peak-oil-for-america-or-the-world/#6232cf894220)

Oil is more plentiful than you can imagine. And we keep figuring out easier and more economical ways to get it out of the ground. In 1938, the famous geologist M. King Hubbert came up with the concept of peak oil, which is defined as having extracted half of the recoverable, conventional oil reserves. After that, oil production declines and cannot keep up with growing demand as the population continues to rise. In Hubbert’s time, most of the conventional oil reserves had already been discovered. Hubbert went on to predict that U.S. production would peak in 1969, and it did appear to peak in 1970. World reserves were supposed to peak around 2010 (see figure). However, about 20 years ago, the industry really leapt forward on the technologies to find oil and to extract it. Particularly fracking. This changed everything. BP’s Spencer Dale summed it up nicely, “For every barrel of oil consumed over the past 35 years, two new barrels have been discovered.” And this shows no sign of slowing down any time soon. Peak oil has moved to a long time from now. While we talk about decreasing our fossil fuel use, it’s easy to forget that humans find it really hard not to use what they have a lot of. And we have a lot of oil. And gas. And coal. In fact, the United States has more oil, gas and coal together than any other country in the world. Fossil fuels are deposits of hydrocarbon materials in the earth. The conventional types are petroleum or crude oil, coal and natural gas. These deposits form from the organic materials in bodies of long-dead organisms trapped in accumulating sediments, and buried for geologic time. For petroleum, these were primarily marine organisms such as plankton deposited over the last 600 million years, although most of the petroleum left formed between 65 and 2 million years ago. For coal, it was plant material primarily from forests deposited during the Carboniferous between 350 and 270 million years ago before microbes had developed that could breakdown lignin, the real hard parts of wood. Fossil fuels form when these organic materials are heated and pressed as they are buried deper in the Earth. Natural gas consists of the volatile components coming off of petroleum, mainly methane (CH4) but also some ethane, propane and butane. Conventional oil and gas are rarely found at the original site of formation. Coal does not migrated from its original site of deposition. Because petroleum and gas are fluid and less dense than rock, both migrate laterally and vertically through more permeable rocks until they are trapped beneath dense impermeable rocks that have been folded or faulted into an advantageous shape for trapping. Petroleum and gas are extracted from these conventional traps, or reservoirs, through wells drilled from the surface. However, unconventional deposits are primarily those where the oil and gas could not migrate to conventional traps, but are stuck in the very tight and tiny pores and fractures in these tight rocks, mainly shales and tight sandstones, or are not very fluid like heavy oils and tars. The ability to seriously exploit these unconventional reserves did not exist practically before 2000. Think of conventional versus unconventional oil like jelly donuts versus tiramisu (see figure). Drilling into conventional sources is like sticking a straw in a jelly donut – the petroleum is trapped in a large single formation that just flows out under pressure. Drilling into unconventional sources like oil and gas shale is quite different, more like tiramisu – the petroleum is in many layers that have to be individually tapped using horizontal drilling and fracking methods to open up the rock. Saudi Arabia has a bunch of really big jelly donuts. The United States has lots of tiramisu, plus some pretty good jelly donuts as well. But we keep finding more tiramisu. Hydraulic fracturing, or fracking, of these rocks has allowed us to recover gas and oil from these tight rocks, and horizontal drilling, as well as drilling many-directional strings from a single well, have allowed pinpoint targeting of these deposits, making recovery economic. If the crude is think and tarry, and won’t flow at all, like the Alberta tar sands, it must be removed by using heat, steam or solvents, or mined in an open pit style, and mixed with more fluid crude for transport. Unfortunately, the environmental cost of unconventionals is even greater than for conventional sources. World oil and gas reserves are estimated in four ways: 1) those that are economically recoverable (this is what is used most often), also known as proven reserves, 2) those that are technically recoverable (we think we could recover these in the future), 3) total or in-place reserves (the total amount of oil and gas we know of but know we can’t get it all out yet), and 4) Unknown reserves (those we do not know about yet, primarily under ice sheets). We still only use the first two to estimate global oil reserves, and so they keep changing as we develop new technologies and find new unconventional reserves.

#### Decoupling solves the new resources stuff

Michael Liebreich 18, Visiting Professor at Imperial College’s Energy Future Lab, “The Secret of Eternal Growth,” 10/29/18, http://ifreetrade.org/article/the\_secret\_of\_eternal\_growth\_the\_physics\_behind\_pro\_growth\_environmentalism

The earth, however, is not an isolated system. It may be nearly closed, exchanging limited matter across the planetary boundary, but it is far from isolated, as it receives a huge daily flux of energy from the sun and radiates almost as much away to space. In his book, Georgescu-Roegen even acknowledged the existence of huge solar energy fluxes, but that didn’t stop him from basing his seminal work on a scientific error. Later in his career, after ruefully acknowledging his mistake, he invented a Fourth Law of Thermodynamics, claiming that “material entropy” would forever prevent materials from being perfectly recycled. Pure fake science.

Around the same time as Georgescu-Roegen was making up thermodynamic laws, a group of concerned environmentalists calling themselves the Club of Rome invited one of the doyens of the new field of computer modelling, Jay Forrester, to create a simulation of the world economy and its interaction with the environment. In 1972 his marvellous black box produced another best-seller, Limits to Growth (iv), which purported to prove that almost every combination of economic parameters ended up not just with growth slowing, but with an overshoot and collapse. This finding, so congenial to the model’s commissioners, stemmed entirely from errors in its structure, as pointed out by a then fresh-faced young economics professor at Yale, William Nordhaus.

A third foundational work in the degrowth canon is Steady State Economics (v) by Herman Daly, later Senior Economist in the Environment Department of the World Bank. In it he explains that “the economy is an open subsystem of a finite and nongrowing ecosystem. Any subsystem of a finite nongrowing system must itself at some point also become nongrowing.” It’s a repeat of Georgescu-Roegen’s error. Daly must have known it too, since he noted that six days’ worth of radiation from the sun contained more useful energy (or exergy, to give it its correct name) than that embodied in all the fossil fuel reserves known at the time.

The point here is not that solar power is the key to endless growth, though it could well be - nuclear fission and fusion are other strong contenders. The point is that when you scratch the surface of any of the seminal tracts of the degrowth movement, you find they are based on the same fake science, right through to the present day.

Jeremy Rifkin’s 1980 Entropy: a New World View (vi) states that “here on earth material entropy is continually increasing and must ultimately reach a maximum”. In 2009, Professor Tim Jackson, the favourite anti-capitalist of the TED generation, published Prosperity Without Growth (vii). In it he pays homage to Daly’s “pioneering case for a ‘steady state economy’” and cheerfully recommends it to students hungering for alternative wisdom – either not understanding or not caring that it is based on a fallacy.

This matters because, for all that the neo-liberal world economy has delivered extraordinary improvements in living standards – in life span, levels of education, infant survival, maternal health, poverty reduction, leisure, and so on (viii) – it is currently failing to address severe, systemic environmental challenges, first and foremost among them climate change. Unless the free-trade, pro-growth, pro-trade right offers a coherent plan, it is ceding the argument to the degrowth, anti-capitalist, anti-trade left.

Climate change is real, serious, and urgent. That recent IPCC 1.5°C report is based on rigorous research. Of course climate change is being co-opted by the “Academic Grievance Studies” brigade (ix), but that doesn’t make the underlying physical science less real. As the world continues to burn through its remaining carbon budget, as temperatures continue to rise, as the ‘signal’ of climate damage becomes clearer against the background ‘noise’ of weather, the demand for dramatic action will only increase.

Limiting the impact of climate change will require the application of technology, both new and yet-to-be-developed, on a heroic scale. Destroying the ability of the world economy to deliver these solutions is the very opposite of what we should be doing. And that is where Nordhaus and Romer come in.

Romer’s great contribution was to identify the contribution of knowledge to economic growth. Before his Endogenous Growth Theory, no one could explain differences in growth rates of as much as 10 percent between countries at a similar stage of development. Romer’s work is the perfect riposte to those who think that economic growth is the same thing as ever-increasing physical material use and pollution; it is also the perfect riposte to those who believe that extractive industries can ever deliver long-term wealth and those who believe the same of agricultural subsidies and import tariffs.

Nordhaus, for his part, was the creator of the first Integrated Assessment Models, bringing together the physics of climate change, its economic impact, and the functioning of the economy. He was also the first person to suggest that attaching a cost to emissions – low at first but rising – would squeeze greenhouse gases out of the economy. Nordhaus is no climate fundamentalist, famously diverging from the view propounded in the Stern Review, that the world needs super-high carbon taxes immediately. Nordhaus accepted that environmental challenges and climate change will act as a drag on the economy but, unlike others before him, he quantified the drag and showed that it is highly unlikely to reverse economic growth.

#### Resource questions are false.

Goldstein ’11 - currently codirects NRDC’s Energy program - He was a founding director of the Institute for Market Transformation, the Consortium for Energy Efficiency, and the New Buildings Institute. Goldstein received a Ph.D. in physics from the University of California, Berkeley. He is a Fellow of the American Physical Society and the recipient of its Leo Szilard Award for Physics in the Public Interest. He was awarded a MacArthur Fellowship in 2002 and is the recipient of the California Alumni Association’s 2003 Award for Excellence in Achievement. (David B., NRDC, “How Bad Ideas Keep Rebounding Into Public Discourse: The Rebound Effect and Its Refutation,” 5/9/11, https://www.nrdc.org/experts/david-b-goldstein/how-bad-ideas-keep-rebounding-public-discourse-rebound-effect-and-its)//PS

Every few years, a new report emerges that tries to resurrect an old hypothesis: that energy efficiency policy somehow results in consumers using more energy instead of less. This hypothesis was introduced in the 19th Century by economist William Stanley Jevons, who argued that increases in the energy efficiency throughout a nation would lead to increases in coal consumption, rather than decreases. Recent articles have attempted to revive these claims, also known as “rebound effect”—restating that energy efficiency tends to encourage more energy use, not less, and that if a consumer’s immediate goal is to tackle climate change, then it seems risky to count on reaching it by improving efficiency. Assuming rebound effects eat up most of the energy savings, such claims then argue that efficiency cannot be a good policy to reduce energy consumption or combat climate change. However, in a [new report](http://www.electricitypolicy.com/Rebound-5-4-2011-final2.pdf) published today in the online journal, [www.ElectricityPolicy.com](http://www.electricitypolicy.com/), my colleagues at the [Natural Resources Defense Council](http://www.nrdc.org/energy/default.asp) dispel these claims, finding that: 1) Rebound effects are small, at high end, and at the low end, very well might have the opposite effect – efficiency might cause people to save more than was already expected. 2) Rebound effects do not jeopardize our ability to reduce greenhouse gas emissions or to lower our energy consumption because they do not change energy efficiency savings significantly. Indeed, to the extent they do, the effects appear to be positive. 3) There are two different types of rebound theory, both of which have been discredited. The first, known as the end-use rebound theory, hypothesizes that people who own efficient appliances would use them more and thereby consume more energy. This is contradicted by comprehensive studies showing end-use rebounds to be small and decreasing over time, as well as the aggregate consumption metrics. For example, when environmentally conscious consumers switch to energy efficient light bulbs, they don’t necessarily leave the lights on longer. The second, the economy-wide theory, hypothesizes that any energy savings from efficiency would be offset by money savings respent on activities that demand additional energy consumption. This is refuted by the fact that only a small portion (maximum of 6-8%) of those expenditures ever goes to energy. For instance, consumers who save money on their electric bill, may use those savings for any number of things – food, movie tickets, or a child’s college fund. Our analysis – [“Are There Rebound Effects from Energy Efficiency? – An Analysis of Empirical Data, Internal Consistency, and Solutions”](http://www.electricitypolicy.com/Rebound-5-4-2011-final2.pdf) – takes a detailed look at what rebound theory really says, how or whether this theory has been tested in the real world, or even how it could be tested, and what policy recommendations and results would flow from it if it were correct. The first thing we found in our research is that rebound enthusiasts rarely define what they actually are predicting. This is an important failing, because the science of economics demands that theories be tested in such a way that the evidence either disproves or supports the hypothesis. Most rebound effect hypotheses are so casual that proponents of rebound can use any real world situation they choose to use and claim that it validates their ideas. Our study was able to find only two ways of stating rebound theory that are rigorous and capable of being tested. Both are firmly refuted by the evidence. The first version of a rebound theory that is scientific enough to be tested asserts that energy use grows in fixed proportion to the economy (to GDP). As my colleague [Sierra Martinez elaborates in his blog](https://www.nrdc.org/blogs/smartinez/breaking_the_link_between_ener.html), the history of the last 40 years in the United States and virtually all other developed economies, shows this to be false. After implementing energy efficiency policies, many economies have indeed broken the lockstep increase in energy consumption with production of wealth. The second version asserts that the savings to a state through efficiency policies will be much less than the sum of the expected savings from the policies and technologies one by one. However, California showed actual reductions in electricity use per capita over the last 40 years (compared to the rest of the nation) that not only equal the sum of the predicted savings but are actually four times as big. Other states showed similar, if smaller, results. Nowhere were there serious predictions of savings accompanied by disappointing results. Of course, there are small rebounds in a limited number of end uses. For example, if you weatherize a drafty home, the occupants may be able to afford to keep it heated more comfortably, and there are indirect effects of efficiency on energy price and thus overall usage. But these effects have been incorporated into most energy models since the 1970s, and are found to be very small and decreasing over time. Rebound proponents often want to rely solely on supply-side solutions. But if rebound suggests that efficiency may not save much energy, similar theories on the supply side would show that new clean energy sources may not reduce the usage of older dirty ones as much as expected either. As you’ll read in the article, [our analysis](http://www.electricitypolicy.com/Rebound-5-4-2011-final2.pdf) found that energy efficiency policies are not only the fastest way to reduce energy use but continue to be most the effective solution to combat climate change. The objections raised by rebound enthusiasts about efficiency policy and its effectiveness are inconsistent and so vague that they cannot be proven (or disproven). The data that is available about rebound theory indeed shows that its predictions are refuted. What we know is certain: energy efficiency continues to offer us a strategy that allows people to enjoy a higher standard of living, with increased energy services, while decreasing energy consumption and combating climate change.

#### Decoupling is true ---their datasets erroneously include a bunch of countries that haven’t reached the tipping point.

Ali **Acaravci &** Guray **Akalin 17**. 1 Faculty of Economics and Administrative Sciences, Mustafa Kemal University. 2017. “Environment–economic Growth Nexus: A Comparative Analysis of Developed and Developing Countries.” International Journal of Energy Economics and Policy, vol. 7, no. 5, pp. 34–43.

6. CONCLUSIONS AND POLICY IMPLICATIONS Since the early 1970s, especially after the United Nations Conference on the Human Environment in 1972, the relationship between production and environmental concerns has been handled by different methods in different disciplines. This is because the environment is of vital importance for human life, and they are confronted with serious environmental problems. The most important of these problems are as follows: The risk of going over the environmental pollution assimilation capacity; the difficulty in return of natural balance in the environment; large-scale health problems caused by environmental pollution; rapid depletion of natural resources; global warming and climate change, and the resulting related natural disasters such as floods; the reduction of biodiversity, air pollution, and soil pollution. Empirical studies on the environmental pollution–economic growth nexus explore the validity of the EKC hypothesis which states that environmental pollution will increase up to a certain threshold of income growth, and after this threshold, will begin to decrease due to the demand for a clean environment and structural and technological inputs. If the EKC hypothesis is valid, economic growth is both cause of and solution to environmental pollution. This approach is often used when arguing that countries should not compromise economic growth policies to reduce environmental effects. The EKC hypothesis is not valid in cases where economic growth that increased production is the only cause of environmental pollution. This has accelerated the search to replace the neoclassical growth strategy. Especially highlighted by the 1992 UNCED conference in Rio de Janeiro, a win-win approach to understanding the appropriate account of the ecological paradigm has gained importance in recent years. Therefore, the validity of the EKC hypothesis is an important issue in formulating economic growth policies for all countries. In this study, the following two samples are used: (i) 40 high income countries (OECD members and non-members) and (ii) 33 upper middle-income countries. These countries are selected according to data available from related income groups. The results from the dynamic panel data methods are as follows: (i) The Durbin–Hausman cointegration test shows that there is a long-term relationship between variables. (ii) The results from the CCE estimator indicate that there is evidence of validity of the EKC hypothesis in developed countries. (iii) The EKC hypothesis is not valid in the developing countries. These results show that economic growth is sufficient enough to safeguard environmental quality for developed countries. However, developing countries have not yet reached income levels high enough to be able to derive their turning points. Therefore, to reduce environmental pollution that comes with economic growth, developing countries should give importance to R&D activities and institutionalization of environmental awareness. An increase in environmental awareness is imperative and developing and developed countries must not forget the fact that the natural world of tomorrow will be created today. Also, our findings show that trade liberalization is not harmful for the environment in developed and developing countries. This means that the increase of trade volume will not produce more carbon emissions. Despite the results obtained for the developed countries, we cannot assume that environmental betterment will continue to accompany further growth of per capita income in developed countries. So that, future studies can examine the relationship between economic growth and other pollutants. Because, along with the economic growth it may increase the amount of other pollutants.

#### Elites block – they’re key.

Samuel ALEXANDER 16. Lecturer and research fellow, University of Melbourne; co-director of the Simplicity Institute; PhD. “Policies for a Post-Growth Economy.” Issues Paper No. 6. April. 11. <http://tinyurl.com/zq3vjn5>.

Hard Truths about a ‘Top-Down’ Transition

I wish to conclude by acknowledging several hard truths about the feasibility of a ‘top down’ transition to a post-growth economy. The first is to note that cultures around the world, especially in the developed world, are not close to being ready to take the idea of a post-growth economy seriously. In Australia, for example, our current and prospective governments are all firmly embedded in the growth paradigm and they show no signs of questioning it – none at all. At the cultural level, the expectation of ever-increasing affluence (which assumes continued growth) is as strong as ever. In this political and cultural context, the policy proposals outlined above – however necessary they might be to confronting the limits to growth predicament – will strike most people as wildly unrealistic, overly interventionist, and probably undesirable. I am not so deluded as to think otherwise.

The second point to note, subtly linked to the first, is that the powers-that-be would not tolerate these policies for a post-growth economy. To provide a case in point, when a relatively fringe Occupy Movement in 2011 began to challenge undue corporate influence on democracy and make noise about wealth inequality, soon enough the executive branches of government bore down upon the activists and stamped out the opposition. Mainstream media made little effort to understand the movement. Given that a postgrowth economy would directly undermine the economic interests of the most powerful corporations and institutions in society, one should expect merciless and sustained resistance from these vested interests if a post-growth movement ever began gaining ascendency.

The third point to note – and probably the most challenging – is that, in a globalised world order, even the bold policies proposed above would be unlikely to produce a stable and flourishing post-growth economy. After all, how would the stock markets react if a government announced a policy agenda that would deliberately aim to contract the economy for environmental and social justice reasons? More specifically, how would the stock markets react if a government, in pursuit of sustainability and global equity, introduced a diminishing resource cap that sought to phase out the most damaging industries and reduce resource consumption by 80% of current Australian levels? I suspect there would be utter turmoil, ultimately leading to an economic crash far greater than the global financial crisis. My point is that it may well be impossible to implement a smooth ‘top down’ transition to a post-growth economy, even if a strong social movement developed that wanted this. The market economies we know today would be unlikely to be able to adjust to the types and speed of foundational changes required. A ‘great disruption’ of some form may be a necessary or inevitable part of the transition beyond growth.

To make matters more challenging still, in a globalised economy, it is not clear whether a single nation could adopt a post-growth economy without inducing a range of antagonistic reactions from other nations. On the one hand, there is a web of international ‘free trade’ agreements that make such a move highly problematic, and could even provoke sanctions from international institutions or other governments. On the other hand, in a globalised economy there is always the threat of capital flight the moment a government threatens to defy the neoliberal logic of profit-maximisation or talks of wealth redistribution. There is also the geopolitical risk of being a leader in a post-growth transition, as this may involve fewer funds available for military forces, weakening a nation’s relative power globally. All of these issues radically call into question the feasibility of a ‘top down’ transition to a post-growth economy, and yet these challenges are rarely acknowledged in the post-growth literature.

#### No mindset shift

Heinberg 15—Senior Fellow-in-Residence of the Post Carbon Institute (Richard, “The Anthropocene: It’s Not All About Us”, <http://www.postcarbon.org/the-anthropocene-its-not-all-about-us/>, dml)

It’s hard to convince people to voluntarily reduce consumption and curb reproduction. That’s not because humans are unusually pushy, greedy creatures; all living organisms tend to maximize their population size and rate of collective energy use. Inject a colony of bacteria into a suitable growth medium in a petri dish and watch what happens. Hummingbirds, mice, leopards, oarfish, redwood trees, or giraffes: in each instance the principle remains inviolate—every species maximizes population and energy consumption within nature’s limits. Systems ecologist Howard T. Odum called this rule the Maximum Power Principle: throughout nature, “system designs develop and prevail that maximize power intake, energy transformation, and those uses that reinforce production and efficiency.” In addition to our innate propensity to maximize population and consumption, we humans also have difficulty making sacrifices in the present in order to reduce future costs. We’re genetically hardwired to respond to immediate threats with fight-or-flight responses, while distant hazards matter much less to us. It’s not that we don’t think about the future at all; rather, we unconsciously apply a discount rate based on the amount of time likely to elapse before a menace has to be faced. True, there is some variation in future-anticipating behavior among individual humans. A small percentage of the population may change behavior now to reduce risks to forthcoming generations, while the great majority is less likely to do so. If that small percentage could oversee our collective future planning, we might have much less to worry about. But that’s tough to arrange in democracies, where people, politicians, corporations, and even nonprofit organizations get ahead by promising immediate rewards, usually in the form of more economic growth. If none of these can organize a proactive response to long-range threats like climate change, the actions of a few individuals and communities may not be so effective at mitigating the hazard. This pessimistic expectation is borne out by experience. The general outlines of the 21st century ecological crisis have been apparent since the 1970s. Yet not much has actually been accomplished through efforts to avert that crisis. It is possible to point to hundreds, thousands, perhaps even millions of imaginative, courageous programs to reduce, recycle, and reuse—yet the overall trajectory of industrial civilization remains relatively unchanged.

#### Political resistance prevents a transition

Sandra **Waddock 17**. Boston College, Carroll School of Management. 2017. The Necessary Transition: The Journey towards the Sustainable Enterprise Economy. Edited by Malcolm McIntosh, Greenleaf Publ.

There is plenty of evidence to suggest that the world is in trouble and that the social contract that exists between business and society, and, indeed, between people and their societies (and governments), not to mention with planet Earth itself, is badly broken. Hurricane Sandy’s devastating impact on New York and New Jersey in the USA in the autumn of 2012 is only one of many examples of climate-change related shifts that are focusing attention on this issue. We know that in this difficult context many progressive and leading companies are trying mightily to become more sustainable—and also that few, if any of them, actually are so today. Indeed, John Ehrenfeld (2008) has made the important point that becoming less unsustainable, which is where virtually all companies working this arena currently are, is quite different from becoming sustainable, which implies a wholly different mindset and approach to business, one in which profits at all costs may no longer be the sole objective (Jensen 2002). In their efforts to understand and cope with both societal and ecological sustainability issues (not to mention business issues), many companies have joined initiatives such as the World Business Council for Sustainable Development (WBCSD), the UN Global Compact and the Principles for Responsible Investment (for financial firms), among numerous others. Today, as a result of a growing infrastructure on corporate responsibility (Waddock 2008), some companies use monitoring and certification approaches to guide their internal management systems and decision-making (e.g. SA 8000, AA 1000, ISO 9000, ISO 14000 and, in the future, ISO 26000). Still others report on their sustainability, responsibility and innovation activities through multiple bottom-line reports using the Global Reporting Initiative (GRI) guidelines. KPMG described this approach in 2011 as having become de facto, albeit voluntary, law, with 95% of the world’s largest 250 companies now undertaking such reporting.1 Whatever their corporate social responsibility/corporate responsibility (CSR/ CR) efforts may be, and however far some leading companies have moved (and some indeed have), there is still far too much greenwashing and too little reality to sustainability initiatives. Too many CR initiatives are still done only to enhance reputation rather than being truly integrated into company practices. Not to mention that too many companies are well behind on the learning curve around CR and sustainability in the first place. Further, even among companies that develop terrific CSR/CR initiatives, there is still an inability or unwillingness on the parts of many to deal with the problematic ecological and societal impacts of their business model, which is of course where the biggest impacts are. Despite efforts such as the WBCSD’s Vision 2050 (WBCSD 2010), which tries to map out what it calls a platform for dialogue on sustainability and a vision of a sustainable future that is quite radical in its approach, there is still an emphasis on continuing business-asusual. If there is not downright resistance to significant change at least on the part of some progressive businesses, there is certainly in many instances an inability to see a different way forward (Schor 2010). Much of today’s business expertise, in fact, lends itself to keeping the system as it is intact (business-asusual thinking) through tactics of stalling, power and leverage, political action committees and campaign contributions, particularly in the USA, though such behaviour is also evident elsewhere. We see many companies that, on the one hand, talk a pretty good game around issues of sustainability and, on the other, use their (growing) political clout to forestall any real changes that might actually limit business behaviours with negative ecological or social impacts. As one respondent to a SustainAbility survey on the relationship between public affairs and corporate responsibility stated: ‘Companies will always lobby for what is in their interests. What we have to be careful of is where lobbying is not in the interest of the market as a whole’ (Beloe et al 2007: l). We could add, in the interests of society and the natural environment to the good of the market.

#### No mindset shift – cap’s internalized and regrowth movements overwhelm.

Milanovic ’17. (Branko; 11/21/2017; Visiting Presidential Professor, Graduate Center - CUNY, leading scholar on income inequality, joined the Graduate Center as Visiting Presidential Professor and LIS Senior Scholar, former Lead Economist in the World Bank's research department; “The illusion of degrowth: Part II,” http://glineq.blogspot.co.uk/2017/11/the-illusion-of-degrowth-part-ii.html)

I do not think that this program is illogical. It is just so enormous, outside of anything that we normally can expect to implement, that it verges, I am afraid, on absurdity. It is simply impossible to put in practice, not only in democracies, but probably in North Korea either. I do not want to be impolite or insulting, but I think that only Kampuchea came up with anything similar. Many countries have lost large fractions of their overall income through wars or civil strife, but none has impoverished itself voluntarily. If put to test in real life, rather than at conferences and blogs, Jason’s program would receive support from almost no one. Capitalist societies, after several centuries of exposure to market ideology and way of life, are structured in such a way that populations have fully accepted, and reaffirm in their daily lives, the objectives that make capitalism thrive. We want more and newer “stuff” every year. The ideology of commodification and commercialization has never been stronger: it is as present in the UK and the United States as in China, Nigeria, Congo, Russia or Brazil. We are not only working for a wage, we are cheerfully renting our homes and cars for money, networking at our children’s birthdays, and having kids who beat each other to grab a new model of smart phone or shoes. In other words, we have global capitalism with a population that has internalized the objectives needed for capitalism to reproduce itself and to expand, by requiring an ever greater amount of saving, investment and output. It is irrelevant whether I like or dislike this situation (as Jason seems to believe). It is just that I observe how the world functions while Jason appears to me to live in an unreal world. If he looked at the real world he would have seen that up to 50 immigrants from Sudan are often found squeezed in the tiny electric compartments of French trains while crossing the border in order to live better lives and buy more “stuff”; he would have noticed that people, as they will doubtlessly do on this Thanksgiving too, get up at 4 in the morning to line up in front of Walmart’s and engage in fistfights so that they can buy the new model of “stuff”; he would have noticed that professors at many, and probably his own, universities fight endless battles over 1 or 2 percent salary increases; he would have noticed that families go into debt just to show off with a new model of a car etc. etc. So his program may in words be accepted by those who would have travelled 10,000 miles to attend the conference where the program is presented; who would use AC while sitting in the conference hall and eat meat during the conferences meals, but they too would not vote for it. For if the proponents of such a program really believed in it, they should start (or should have already started) a political movement that would promise to implement it and save the planet. They should explicitly promise continuous annual income declines of several percentage points, lower wages, pensions and social transfers, a work week of 20 hours or fewer, closure of most gas stations and many airports, home production of key food items, picketing of factories that work longer hours or supermarkets that sell meat. They should put this program on their flag and see how many people will vote for it.

#### Private sector will invest – and it outweighs all impacts.

Everett 16 (Sean, CEO of Prome Biological Intelligence, a global biotechnology company, editor of Medium’s news outlet dedicated to space colonialization titled “The Mission”, BS Mathematics & Actuarial Science, MBA from UChicago,“Humanity’s Extinction Event Is Coming” https://medium.com/the-mission/humanitys-extinction-event-is-coming-c0f84f1803f)

But the reality is that an asteroid impact, a change in our magnetic field, or the rising temperature of Earth’s climate are all events that we currently cannot escape. There is no back-up plan. We are, for better or worse, tied to the fate of this planet. As history has shown, that’s not a good fate to be tied to. In fact on September 7, 2016 a 30-foot asteroid flew between the Earth and the Moon. Our most powerful instruments only detected it with two days notice. Two days. If the asteroid was only 1000-foot wide, it would destroy all human life and we’d have no back-up to get out of it. Even the White House is worried about it. Five, yes five, major extinction events have occurred on our planet that we know about. We’re due for another. And when that happens, what’s our alternative? You can’t move to another house. You can’t buy survival, even with a billion dollars in the bank. The only way out, is up. We must find a way to become multi-planetary if we want to save humanity, your family, and yes, even yourself. Only this can restore the honor we seemed to have lost from the brave days of the 60s, while also ensuring our survival. It’s for the species, folks. And as a species, we have not allowed ourselves the opportunity to blast off for the stars. Only the space race in the 60s when we were afraid enough of a self-inflicted global extinction event (read: nuclear) that we put forth the funding required to launch into orbit and onto our moon. We didn’t have calculators back then, and now we have supercomputers in our pocket, but no one is allowed out of our atmosphere, save for a few communication and spy satellites. Doesn’t that make you mad? It’s not some oppressive government that tells us no. It’s us. We pay our taxes. We elect leaders. Those leaders choose Defense as the primary budget line item, but forget about defending against the forthcoming apocalypse. Funding for NASA in the United States has decreased from 4% of the national budget in the 60s to about 0.5% from 2010 onwards. That’s just the money side. But in order to move past this threshold from our home planet to space and then onto other planets, we need to do two things: Travel there. Survive. Luckily, we can simplify the problem of passing this barrier by sending machines in our place. Like TARS from Interstellar, they can go places humans cannot and explore the environment for habitability and resources, even in particularly hostile conditions. Maybe not black hole hostile, but definitely Mars hostile, as the Curiosity Rover has shown. Only now, with a few bold, private startups are we beginning to see a re-emergence of the space industry. We are about to pass a few very important tests that allow us to explore and visit the cosmos. The first is launching physical things into space. This is the catalyst that will jump start a new space race. Prices of sending cargo are falling dramatically, down to nearly $500 per pound of payload with SpaceX’s Falcon 9 heavy re-usable rocket. Note that the re-usable part is key. We can’t throw away our “space car” every time we Uber it. And once that becomes standard and cost-optimized we might be able to get that down to $10 per pound. Imagine what could happen when it costs the same amount to ship something across town as it does into space. The second, and this is just as important, is the wave of autonomous machines. Tesla has popularized the notion of self-driving cars. SpaceX lands their rocket onto a small barge in the ocean autonomously. Companies are buying startups in the space. Self-driving will be our gift, our talisman, on the quest to save the species by becoming multi-planetary. II. Shipping Ourselves to Space The graph below is from the Founders Fund manifesto, showing the decreasing cost of launching something into space. It begins with the 1960s US-versus-Russia space race and extends to the present day SpaceX-versus-Blue Origin reusable rocket race. The cheapest method we have today is SpaceX’s Falcon series rockets. With the Falcon 9 Heavy, it’s predicted launching cargo into space will be cheaper than ever before, at $750 per pound of payload delivered to low earth orbit (LOE)on an expendable rocket. You have to note here, however, that these statistics are as cheap as possible. It costs more to deliver payload on a non-reusable rocket, and on something that’s further out than LEO, like geosynchronous orbit, or to Mars. For example, based on SpaceX’s published pricing, it would be at least 4x more expensive to deliver far less cargo to Mars. So what happens when we reduce that cost to $10 per pound? Namely, an explosion of startups, much like iOS. Instead of pushing to production for your continuously deployed web and mobile app, we will see future developers push to production by deploying physical things into space. “STAGE” takes on an entirely new meaning for software developers when it means your automated regression tests fail, it could blow up a rocket and hurt people on board. That’s why SpaceX and Blue Origins exist. To make this continuous-deployment-to-space process as cheap and fast as possible. By Elon’s calculations, every 15 minutes. III. Self-Driving Space Explorers The most successful products for space, at least in the beginning, will make money by pushing this stuff into orbit. Things like science experiments and new 3D printers. A company called Made in Space creates a number of these products, including the empty box you see below used for sending things up with Blue Origin. The box shown in gray is a specialized 3D printer that works in zero gravity. Remember how most 3D printers work. It squeezes out a single layer of liquid ooze, and then another, over and over again until it builds up enough vertically that it creates an object. This can be simple plastic or more esoteroic metals. But when you’re “dripping” something, held down in place by gravity, the entire process has to be re-imagined for space. Things in zero-G would just float away. Enter these chaps. There’s also the very real need for oxygen, food, water, and shelter from the harsh elements. Funny how we will end up recreating Maslow’s Heirarchy in every new voyage or planetoid we want to colonize. And space mining is off to the races with the recent announcement of Deep Space Industry’s Prospector-1: Their vision is to extract water from asteroids and use the chemical components to hydrate us, but also as oxygen (breathing) and hydrogen (fuel). To do that, you have to identify candidate asteroids, physically get to them, land and attach, and then do surveying, prospecting, and extraction. In short, you’re going to need some level of self-driving capabilities to make this happen. And wouldn’t it be nice if it “just worked” right out of the box. Unfortunately, in space you don’t have fleets of these space craft, millions of miles of training data, maps, or an internet connection to the cloud so how the heck are deep learning algorithms going to work? I don’t think they will. And that’s what I believe we need a better approach.

#### Group no resources and resource wars – fourth wave means no scarcity

**Kaku 18** [Michio, an American theoretical physicist, futurist, and popularizer of science. He is a professor of theoretical physics in the City College of New York and CUNY Graduate Center. “There's Only One Way For Humanity to Survive. Go To Mars.,” <https://news.nationalgeographic.com/2018/02/there-s-only-one-way-for-humanity-to-survive--go-to-mars-/>]

You use the phrase “**the fourth wave of science**.” Explain what this means and how it could one day make it possible to terraform Mars. We’ve had three waves of scientific innovation. The first wave, the Industrial Revolution, gave us the steam engine, the locomotive, and factories. The second wave was electricity and magnetism, whereby we had TV, internal combustion cars, a beginning of the space program. The third revolution is high tech: computers, lasers, the Internet. Now we have the fourth wave of innovation: **artificial** **intelligence,** **biotech,** **and nanotech**. That’s going to change the way we view Mars. Many people say Mars is cold and desolate, and there’s nothing to grow there. **We can genetically modify plants** **and algae** **to thrive** **in the Martian atmosphere.** But who’s going to do the heavy lifting? We all would like to see futuristic cities on Mars, but robots are going to become much more adapted to working in these harsh environments by the end of this century, so **we expect to see** **robotic construction** **workers building the fantastic domed** **cities you see in science fiction novels**.

#### No aliens

Forgan 19 [Duncan Forgan, researcher in the School of Physics & Astronomy at the University of St Andrews.] “Predator-Prey Behaviour in Self-Replicating Interstellar Probes” 2 March 2019 (<https://arxiv.org/abs/1903.00770>) – MZhu

Why have we detected no sign of intelligent life beyond the Earth? This fundamental question continues to challenge our deepest-held beliefs about humanity and our place in the Universe. Fermi’s Paradox forces us to confront our Copernican assumptions about our lack of uniqueness with the lack of extraterrestrial intelligences (ETIs, see e.g. Brin, 1983; Cirkovi ´ c, 2009). Its strongest formulation can be given as follows ´ (Tipler, 1980). Imagine a civilisation constructs an interstellar probe that is self-replicating. Such a probe would be able to produce a copy every time it visits a new star system. As each copy makes copies, the number of self-replicating probes (SRPs) grows exponentially, and every star in the Milky Way is explored on a timescale much, much shorter than its age. Estimates for this exploration timescale vary, but are as short as ten million years (Nicholson & Forgan, 2013), and perhaps shorter still. Given that this timescale is much shorter than the age of the Earth, and only one ETI constructing SRPs is sufficient to produce this scenario, on balance we should expect to see an interstellar probe orbiting the Sun. And yet, we do not. How can this be resolved? Among many possibilities, we can include solutions that require civilisations to be rare. However, as a single civilisation is sufficient to swamp the galaxy in SRPs, we are effectively asking for humanity to be alone in the Universe.

### Court Clog---1ar

#### 2---Immigration cases

Robert Arnold, 9-30. Investigative Reporter. “Growing backlog in immigration court leaves many migrants living in limbo.” September 30, 2021. https://www.click2houston.com/news/investigates/2021/10/01/growing-backlog-in-immigration-court-leaves-many-migrants-living-in-limbo/

There is growing concern among immigrant rights advocates and immigration attorneys on whether the number of migrants apprehended along our southern border will deepen an already staggering backlog of cases in immigration court. However, Congress remains divided on what should be included as part of wholesale immigration reform. “How would you characterize what’s happening right now?” asked KPRC 2 Investigator Robert Arnold. “Well, certainly it’s a mess,” said Jeronimo Cortina, Ph.D., associate director of the University of Houston’s Center for Mexican American Studies. Cortina said our current system is outdated and fails to take into account the current state of world affairs and what is driving so many migrants to our border. “The ultimate concern is that our immigration policy is never going to be fixed and we’re going to continue in the same path,” said Cortina. “It has to be devoid of politics, if not, we’re not going to get anywhere.” Cortina is talking about a path that recently led an estimated 15,0000 Haitian migrants to Del Rio where they had to camp under a bridge, waiting to be processed by Border Patrol. Executive Director of the migrants’ rights group, FIEL, Cesar Espinosa, said the current system also underestimates the desperation of migrants fleeing poverty, corruption, crime and natural disaster. “They said, ‘We tried, but there’s no avenue, and when we have two kids dying of starvation, we just have to do what we have to do,’” said Espinosa. Houston immigration attorney Charles Foster said adding to the problem is the way our country handles asylum claims from many of those who are caught illegally crossing the border. “For people that are desperate, they want to take, just like people going to Vegas, they want to take a chance that they can win in this system for a better life,” said Foster. The Transactional Records Access Clearinghouse maintained by Syracuse University showed since 2017, between 60 and 70-percent of asylum decisions in immigration court denied relief. However, TRAC data shows it can take years before these decisions are reached. According to the TRAC database, more than 1.4 million cases are pending in immigration court, and nationally a case is pending an average of 950 days. In Houston immigration courts, which are more crowded, the average time a case is pending is 1,203 days. “It was never designed to deal with the mass exodus from dysfunctional countries,” Foster said of our asylum system. Just last week, more than 12,000 Haitian immigrants were released into the U.S. while their removal cases are pending.

#### doesn’t assume delta variant.

Dave **Bohman, 8-4**. Contact 5 Investigator, spending the last decade as the Investigative Reporter for WNEP-TV in Scranton, Pennsylvania, graduated from Syracuse University, Dave has four Emmy Awards. “Delta variant could slow already backlogged court system.” August 4, 2021. <https://www.wptv.com/news/local-news/investigations/delta-variant-could-slow-already-backlogged-court-system>

Months after courts reopen, judges consider new restrictions Some are concerned that an already backlogged court system could be further delayed because of the delta variant. WEST PALM BEACH, Fla. — Shirley Borges' last motorcycle ride ended in March 2019 when police said she was struck head-on by a car driven by a man under the influence of drugs and alcohol. "She loved to just go off on the bike and feel the wind in her face," said her friend Melanie Wildrich, who wonders why that case still has not gone to trial. "You can't have closure if there's no justice." Christian White has pleaded not guilty to DUI manslaughter and vehicular homicide. He was charged almost two-and-a-half years ago. After coronavirus shut down Florida courts in March 2020, 12 of White's pre-trial hearings were canceled and five others were delayed. "It's hard because you're waiting, and there are reminders -- you know, her birthdays, the anniversary of her death," said Wildrich. Now she worries the surge of new COVID-19 cases fueled by the delta variant will continue to bring court delays. A [Contact 5 investigation this spring](https://www.wptv.com/news/local-news/investigations/judicial-logjam-worsens-in-florida-more-than-1-million-court-cases-backlogged) found a backlog of more than 1 million cases. In recent months, Florida's 19th Judicial Circuit, which covers the Treasure Coast, lifted all restrictions that were imposed at the outset of the pandemic. But in court this week, Judge Sherwood Bauer Jr. said most hearings of criminal cases will return to Zoom. "The only in-court proceedings that criminal court can have, once we get through some previously scheduled matters, is jury trials," said Bauer. In Palm Beach County, Chief Judge Glenn Kelly already reinstated the mask mandate. He wrote a memorandum saying other restrictions may be on the way in the wake of the coronavirus surge. "Think of the movement in and out of the court system," noted West Palm Beach attorney Greg Morse, who worries the fallout from the surge could soon delay the criminal trial of one of his clients. The trial is scheduled to start in eight days, but Morse's client is in a state prison and will have to quarantine in the county jail for 14 days before he can go to court. "It just seems like the functioning with the delta variant is going to change how the court is even able to get the participants in court for trial," said Morse. In Port St. Lucie, Wildrick wonders how many more delays court delays in the case of her friend's alleged killer lie ahead.