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### NEW

#### The Contention is Food Security:

#### Agriculture markets have become heavily consolidated through anticompetitive behavior, threatening the stability of the US agricultural supply chains.

Diana L Moss and Laura Alexander 20, President of the American Antitrust Institute and Vice President of Policy at the American Antitrust Institute. “When COVID-19 is the Symptom and Not the Disease: Consolidation, Competition, and Breakdowns in Food Supply Chains,” American Antitrust Institute, 5-7-2020, https://www.antitrustinstitute.org/work-product/when-covid-19-is-the-symptom-and-not-the-disease-consolidation-competition-and-breakdowns-in-food-supply-chains/

The integrity and stability of the food system is a matter of national health, safety, and security. Disruption of the meat or any other food supply chain is potentially catastrophic. But few analysts have looked beyond the immediate COVID-19 pandemic to isolate one of the deep-rooted causes of weakness, or even breakage, in supply chains. Were our food processing, manufacturing, and distribution markets more competitive, the current crisis (and government intervention) would be neither necessary nor warranted. Much like AAI’s recent commentary on COVID-19 and consolidation in medical equipment markets, this commentary explains how a lack of competition can imperil the stability and security of the food system.[3]

THE ROLE OF COMPETITION IN ENSURING STABLE, RESILIENT FOOD SUPPLY CHAINS

COVID-19-related disruptions are, in part, a symptom of underlying competition problems in our food system, and an early warning sign of the harms yet to come. Competition benefits consumers and producers in myriad ways. These include fair prices, high quality products and services, and incentives to innovate. Another key benefit of competition is promoting diversity and redundancy in sources of agricultural inputs, processing, manufacturing, and distribution. This promotes resiliency and stability in the interconnected markets that form the food system.

Supply chains are routinely subjected to shocks such as extreme weather, disease, and conflict.[4] But those that feature robust competition at various levels are far more likely to ensure the reliable and stable distribution of essential food products. If some parts of the supply chain are disrupted, competition works to ensure that rival suppliers fill the void to meet demand.

As the COVID-19 pandemic illustrates, food supply chains can fail the “resiliency” test. While a number of factors may account for this, we cannot ignore the role played by the wave of consolidation that has fundamentally reshaped the food system in the U.S. over the last two decades. Consolidation has diminished competition in the agricultural inputs, processing, manufacturing, and distribution segments. As the closures of meat processing plants demonstrate, when the few large firms that control these critical segments fail, the supply chain can break.

#### Specifically, Ag firms take advantage of lackluster antitrust merger enforcement efforts and favorable law to engage in anticompetitive mergers.

Diana L Moss and Laura Alexander 20, President of the American Antitrust Institute and Vice President of Policy at the American Antitrust Institute. “When COVID-19 is the Symptom and Not the Disease: Consolidation, Competition, and Breakdowns in Food Supply Chains,” American Antitrust Institute, 5-7-2020, https://www.antitrustinstitute.org/work-product/when-covid-19-is-the-symptom-and-not-the-disease-consolidation-competition-and-breakdowns-in-food-supply-chains/

Merger control is designed to prevent acquisitions that are likely to substantially lessen competition. This includes acquisitions of head-to-head rivals; customers or suppliers; and potential rivals. Vigorous enforcement prevents harmful outcomes by stopping illegal mergers in their “incipiency.” The U.S. antitrust agencies have historically divided up the food supply chain for the purposes of reviewing food and agriculture mergers. The Federal Trade Commission (FTC) reviews most proposed transactions involving the downstream part of the supply chain, including food manufacturing and retail grocery.[9]

The U.S. Department of Justice (DOJ) reviews mergers in the upper part of the supply chain, such as food processing (e.g., grain milling and meat packing), producers (e.g., cattle feeders and chicken growers), and biotechnology inputs such as GMO traits, seeds, and agrochemicals. It is not clear how the FTC and DOJ coordinate with each other in reviewing mergers along the supply chain, so that the proverbial “right hand knows what the left hand is doing.”

IS MERGER ENFORCEMENT KEEPING UP WITH CONSOLIDATION IN FOOD?

Between 1998 and 2018, almost 1,300 mergers in the processing, manufacturing, and food distribution sectors were reportable to the U.S. antitrust agencies under federal guidelines.[10] Government data reveals that about one-quarter of those transactions were cleared to either the DOJ or FTC for further review. About one-quarter of those “clearances,” in turn, received a request from either agency for additional information. This is a slightly higher rate of “Second Requests” for food mergers, as measured by the percentage of total clearances that received a Second Request, than for mergers across all sectors in the economy. The majority of these deals involved consolidation in the middle part of the supply chain—food processing and manufacturing.

Only a small fraction of the food mergers that were cleared to the DOJ and FTC between 1998 and 2018 were actually challenged by the government. Merger challenges can result in a number of outcomes: successfully enjoining a merger, unsuccessfully enjoining a merger (which then proceeds), forced abandonment of a transaction, and an order containing requirements to remedy competitive harms raised by a deal. The rate at which the government challenged food mergers, as measured by the percentage of total clearances that were challenged, is just below the average across all sectors. More than one-half of the merger deals that were challenged by the agencies were in the retail grocery segment where significant competition has been eliminated over time. The remainder include mergers in beef packing, poultry processing, and dairy, other food products, and broadline foodservice distribution.

Two major government wins were the DOJ’s successful challenge to the merger of two of the largest beef packers (JBS and National Beef) in 2009 and the FTC’s move to block the merger of the two largest broadline food distributors (Sysco and US Foods) in 2015.[11] U.S. consumers and producers need more of this type of aggressive, successful enforcement. But a major failure was the FTC’s approval of the merger of Safeway and Albertsons. The merger was allowed to proceed, subject to the divestiture of almost 150 stores to a regional west-coast grocer, Haggen. The failure of Haggen to maintain the divested stores led to their shuttering only a few months later.[12] In 2019, the DOJ declined to challenge the acquisition of Iowa Premium by one of the largest packers, National Beef, a deal that was opposed by numerous advocacy groups. The merger was projected to adversely affect the important cash market, which determines the base price for cattle sold on contracts or formulas.[13]

As shown in the figure below, over the last 20 years, the intensity with which the agencies have looked harder at food mergers through the Second Request process appears to have waned. The apparent downward trend in Second Requests over the past two decades is troubling. It may signal chronic resource constraints at the agencies. But it also likely reflects the view that has dominated enforcement for the last four decades. Namely, most deals are viewed as pro-competitive because cost-savings and consumer benefits are claimed to outweigh any anticompetitive, harmful effects.

Chart, line chart

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Regardless of the reason, U.S. consumers are still faced with a swath of mergers that have created larger integrated companies that reach to almost every part of the supply chain. These food goliaths can exercise their market power to suppress competition, which is problematic in its own right. But as the COVID-19 crisis has demonstrated, the lack of competition in food processing, manufacturing, and distribution has also created a fragile and unreliable supply chain.

POLICING ANTICOMPETITIVE CONDUCT IN THE FOOD SYSTEM

It should come as no surprise that in a supply chain with less and less competition, other violations of the antitrust laws, including collusion and monopolization, become more commonplace. Indeed, the dominant firms and oligopolies in food processing, manufacturing, and grocery have given rise to numerous concerns. The public and private antitrust cases in the food industry in recent years reflect both the rising incidence of troubling behavior and the challenges and limitations of antitrust enforcement.

The DOJ, for example, has prosecuted violations of Sections 1 and 2 of the Sherman Act in almost 20 cases in the food industry over the last 20 years. Notably, however, the Sherman Act claims appeared to be an afterthought in the majority of these cases, which were motivated principally by kickback schemes that defrauded the public. Competitive injury, and core antitrust concerns such as collusion or exclusionary conduct, did not feature prominently.[14] Smithfield, one of the largest pork processors in the U.S., which was acquired by the Chinese food behemoth Shuanghui International in 2013, was charged with violations on two separate occasions involving failure to comply with requirements under the Hart Scott Rodino Act before purchasing stock in a rival and pursuing an acquisition.[15] DOJ has launched several cartel investigations in food over the last two decades, but, with few exceptions, those investigations have yet to yield indictments or civil complaints.[16]

#### These anticompetitive mergers force farmers into unsustainable farming practices, such as monocultures, by limiting the variety of ag inputs and by forcing farmers to scale operations to remain in business.

Patrick Woodall 18, Research Director at Food & Water Watch, “Monopoly Power Corrodes Choice and Resiliency in the Food System,” The Antitrust Bulletin, 63.2, https://doi.org/10.1177/0003603X18770063

But already high and increasing levels of economic concentration in the agricultural and food sectors impact far more than consumer and farmer prices. Consolidation has substantially curtailed the choices available to consumers and farmers. Grocery stores now teem with an illusory cornucopia of different products, but the vast majority of the supermarket items are manufactured by a few firms with dominant market positions.

Horizontal and vertical concentration in the agriculture sector has constrained farmers’ choices and autonomy. Concentration in the seed and fertilizer industries has significantly limited farmers’ cultivation options. Perhaps more importantly, the larger, vertically integrated agribusinesses have pushed farmers to increase the size, scale, and intensity of their farms in order to sell their crops or livestock and maintain economic viability. This limits farmers’ options and autonomy to control production decisions on their farms.

#### There are two scenarios.

#### First is Food Security---lack of variety in ag inputs means our entire supply line can be wiped out by a single crop disease, which will inevitably come.

Martin 13. DePaul JD, “Seed Savers v. Monsanto: Farmers Need a Victory for Wilting Biodiversity,” 24 DEPAUL J. ART TECH. & INTELL. PROP. L 95, HeinOnline

IV. “PLAGUE OF SAMENESS”: BIODIVERSITY CONSEQUENCES Many describe the increasing genetic uniformity as a “plague of sameness,” overtaking vast fields of crops with monoculture agriculture.’16 The economic effect of this “plague of sameness” is enormous: “pest[] and plant diseases are . . . estimated to exact a toll of $20-33 billion each year nationwide.”’ However, the dangers of this plague are not limited to economic concerns. When crops are threatened by pests or disease, genetically uniform crops could be wiped out. Without the ability to locate genetic resistance in any varieties, the world could lose entire major food crops, such as soybeans, corn, rice, and wheat. A. Genetic Resistance According to Cary Fowler and Pat Mooney, “today’s plant breeder will search for one major gene to confer resistance for the new variety.”’ One-gene resistance provides that there will be only “one line of defense” against pests and diseases.’59 When overcome by pest or disease, the gene can no longer provide resistance. 6 0 Breeding, then, is a “step by step evasion of the pathogen,” and the use of one-gene resistance lacks an “ultimate vision of permanent or stabilized resistance.”’6 ‘ In contrast, the traditional “landrace” confers resistance on a new variety as the product of a large number of genes working together.’6 2 The resistance conferred by the traditional “landrace” is long-lasting, because these varieties have survived among pests and diseases “in the center of diversity.”’ 3 Additionally, heirloom varieties, discussed above, are used to breed insect, disease, and drought tolerance into modern crops.’” In contrast to the conventional three- or four-way hybrid varieties, GE varieties, such as Roundup Ready soybeans, are “single-cross hybrids.”1 65 The “plague of sameness” becomes even riskier when farmers plant pure line varieties instead of a mixture of varieties, or where a “few successful crop varieties replace the great diversity of crop and types found in farmers’ fields.” 66 Monoculture agriculture is prominent in developed countries,’16 largely because of the predictability that single cross varieties offer farmers and the agricultural industry.16 1 With this monoculture agriculture, however, when part of the uniform crop is wiped out by pests or diseases, the entire crop is wiped out.’69 Furthermore, when the neighbor farmer plants the same variety, his crop is also wiped out.’ Finally, “when virtually every farmer plants the same variety or group of varieties, the risk becomes dangerous.””’ The lack of resistance and genetic variability leads to the vulnerability of crops to pests and diseases. B. Pest Management First, the “plague of sameness,” or monoculture agriculture, threatens crop resistance to pests. Specifically, “[p]athogens or insect pests that mutate to overcome a crop’s innate resistance or to escape the effects of fungicides or pesticides, together with monoculture conditions, heighten the risk that such novel pests could rapidly spread and cause great losses in crop yield and quality.”’ 72 In recent years, the percentage of annual crop lost to insects has doubled,’7 3 and global crop loss due to pests.’74 The rise of pest problems is an estimated 30-40% of potential yield is also evident through increased pesticide use: from 1945 to 1975, the amount of pesticide employed rose from less than 200 million pounds to 1600 million pounds.’75 Genetic mutations in these pathogens or pests require quick replacement with varieties that have resistance. 76 These replacements require the screening of gene resources to find new resistance. 7 7 However, with a narrowing genetic resource base, varieties that have resistance are slowly disappearing. C. Vulnerability to Diseases Second, monoculture agriculture increases vulnerability to disease causing widespread damage. Two historical examples show the dangers of monoculture agriculture in the face of disease. Ireland’s potato blight in 1846 that led to the Great Famine, was a result of a lack of crop diversity.”’7 The Irish were dependent on the potato for food, and about 90% of the potatoes eaten were a variety called “Lumper. “l79 When blight infected the potatoes, the Lumper variety lacked resistance in the tubers.’” This lack of resistance and the uniformity of the potatoes allowed the blight to dramatically wipe out Ireland’s potato supply. Potatoes “were the first crop in modem history to be devastated by lack of resistance.””’ Not only were potatoes nearly lost as a major food crop, but 1 to 2 million Irish people died or left Ireland as a result of the famine.18 2 In more recent history, the U.S. corn leaf blight of the 1970s provides another example of the dangers of “monoculture” agriculture. Similar to the uniformity of the Irish potato crop, in 1970, almost 85% of U.S. cornfields were planted with one corn variety, Texas cytoplasmic male sterile.’ This type of corn was highly susceptible to a new type of fungus that wiped out 15% of the corn crop and resulted in a $1 billion loss in the United States.’84 While the U.S. hybrid corn industry only “[took] one year to correct the problem and get resistant varieties back on the market,” Fowler and Mooney point out that biodiversity crises such as these raise many “unanswered questions.”’ One of the most troubling questions is: with such a narrow genetic base, will the seed industry be able to find a quick solution the next time a crisis occurs?’86 A potential soybean “rust” crisis in 2004, with a disease “that could ruin a field in two weeks, and . .. up to 80 percent of yield,” spurred plant scientists to screen seed samples in the USDA U.S. crop gene banks.’ Scientists identified some soybean varieties with weak resistance, but mostly found that none was fully immune to the rust.’ As a result, the scientists had to find resistance in wild relatives of soybeans from China, Taiwan, and Australia-countries where soybeans were first domesticated.’89 The dangers of the “plague of sameness” show that crop diversity needs to be preserved for future generations. The Genetic Resources Conservation Program has found that “[n]early every major U.S. food or fiber crop is battling pests and diseases against which it has no resistance.”’ Without resistant varieties from a diverse genetic resource pool, future plant scientists will not be able to locate or introduce resistance into modem crops. As a result, “without these infusions of genetic diversity, food production is at risk from epidemics and infestations.””’ The Food and Agriculture Organization of the United Nations has found that the Earth’s population will grow by 50% in the next fifty years; thus, “crop diversity must be managed in a manner that promotes productivity with reducing diversity.” 92

#### Market concentration ensures the failure of anyone ag producer will doom the entire sector---only the plan can rebuild resiliency to withstand inevitable food supply shocks.

Patrick Woodall 18, Research Director at Food & Water Watch, “Monopoly Power Corrodes Choice and Resiliency in the Food System,” The Antitrust Bulletin, 63.2, https://doi.org/10.1177/0003603X18770063

Concentration can also reduce quality and compromise safety. According to the U.S. Department of Agriculture (USDA), high concentration levels allow the largest companies to extract more economic value from food purchases, but “consumers typically bear the burden, paying higher prices for goods of lower quality.”7 The substantial scale combined with highly concentrated chokepoints make the food system vulnerable to potentially larger, more widespread food safety problems.

The scale of plants in a heavily consolidated industry means that a single problem in one larger plant can now impact the entire food chain. In 2011, Cargill voluntarily recalled more than 36 million pounds of ground turkey after an illness outbreak caused by antibiotic-resistant salmonella.8 The recall represented several months’ worth of production from a single plant in Arkansas in an industry where the top four firms processed 55% of turkey meat.9 In total, 136 people across thirty-four states were infected, causing thirty-seven hospitalizations and one death, disproportionately caused by the bacteria’s resistance to antibiotics.10

Food safety problems at even modestly sized suppliers can infiltrate a significant portion of the food system, when ingredients pass through the highly consolidated food processing sector. In 2007, the Food and Drug Administration (FDA) received reports of 17,000 pet illnesses, including 4,000 dog and cat deaths, believed to be the result of melamine contamination in imported Chinese gluten ingredients used to make pet food.11 Sixty million packages of over 150 brands of pet food were recalled in the United States, the largest recall in history—and all the pet food originated from one Kansas facility that had used the contaminated wheat gluten.12

A year later, the problem of consolidation and chokepoints struck the human food supply. A 2008 peanut butter salmonella outbreak led to nine deaths and more than 700 illnesses in forty-seven states.13 The problem began at a single company’s filthy plants that manufactured 3% of peanut products—but the company’s peanut ingredients passed through a highly consolidated food industry, leading to a recall of over 3,600 products.14

#### U.S. food shocks reverberate globally---causes multiple hotspots to escalate

Castellaw 17 – John Castellaw, National Security Lecturer at the University of Tennessee, Founder and CEO of Farmspace Systems LLC, Former President of the Crockett Policy Institute, Retired Lieutenant General in the United States Marine Corps, “Food Security Strategy Is Essential to Our National Security”, Agri-Pulse, 5-1, https://www.agri-pulse.com/articles/9203-opinion-food-security-strategy-is-essential-to-our-national-security

The United States faces many threats to our National Security. These threats include continuing wars with extremist elements such as ISIS and potential wars with rogue state North Korea or regional nuclear power Iran. The heated economic and diplomatic competition with Russia and a surging China could spiral out of control. Concurrently, we face threats to our future security posed by growing civil strife, famine, and refugee and migration challenges which create incubators for extremist and anti-American government factions. Our response cannot be one dimensional but instead must be a nuanced and comprehensive National Security Strategy combining all elements of National Power including a Food Security Strategy.

An American Food Security Strategy is an imperative factor in reducing the multiple threats impacting our National wellbeing. Recent history has shown that reliable food supplies and stable prices produce more stable and secure countries. Conversely, food insecurity, particularly in poorer countries, can lead to instability, unrest, and violence.

Food insecurity drives mass migration around the world from the Middle East, to Africa, to Southeast Asia, destabilizing neighboring populations, generating conflicts, and threatening our own security by disrupting our economic, military, and diplomatic relationships. Food system shocks from extreme food-price volatility can be correlated with protests and riots. Food price related protests toppled governments in Haiti and Madagascar in 2007 and 2008. In 2010 and in 2011, food prices and grievances related to food policy were one of the major drivers of the Arab Spring uprisings. Repeatedly, history has taught us that a strong agricultural sector is an unquestionable requirement for inclusive and sustainable growth, broad-based development progress, and long-term stability.

The impact can be remarkable and far reaching. Rising income, in addition to reducing the opportunities for an upsurge in extremism, leads to changes in diet, producing demand for more diverse and nutritious foods provided, in many cases, from American farmers and ranchers. Emerging markets currently purchase 20 percent of U.S. agriculture exports and that figure is expected to grow as populations boom.

Moving early to ensure stability in strategically significant regions requires long term planning and a disciplined, thoughtful strategy. To combat current threats and work to prevent future ones, our national leadership must employ the entire spectrum of our power including diplomatic, economic, and cultural elements. The best means to prevent future chaos and the resulting instability is positive engagement addressing the causes of instability before it occurs.

This is not rocket science. We know where the instability is most likely to occur. The world population will grow by 2.5 billion people by 2050. Unfortunately, this massive population boom is projected to occur primarily in the most fragile and food insecure countries. This alarming math is not just about total numbers. Projections show that the greatest increase is in the age groups most vulnerable to extremism. There are currently 200 million people in Africa between the ages of 15 and 24, with that number expected to double in the next 30 years. Already, 60% of the unemployed in Africa are young people.

Too often these situations deteriorate into shooting wars requiring the deployment of our military forces. We should be continually mindful that the price we pay for committing military forces is measured in our most precious national resource, the blood of those who serve. For those who live in rural America, this has a disproportionate impact. Fully 40% of those who serve in our military come from the farms, ranches, and non-urban communities that make up only 16% of our population.

Actions taken now to increase agricultural sector jobs can provide economic opportunity and stability for those unemployed youths while helping to feed people. A recent report by the Chicago Council on Global Affairs identifies agriculture development as the core essential for providing greater food security, economic growth, and population well-being.

Our active support for food security, including agriculture development, has helped stabilize key regions over the past 60 years. A robust food security strategy, as a part of our overall security strategy, can mitigate the growth of terrorism, build important relationships, and support continued American economic and agricultural prosperity while materially contributing to our Nation’s and the world’s security.

#### Those conflicts go nuclear.

FDI 12 – Future Directions International (“International Conflict Triggers and Potential Conflict Points Resulting from Food and Water Insecurity Global Food and Water Crises Research Programme”, May 25, <http://www.futuredirections.org.au/files/Workshop_Report_-_Intl_Conflict_Triggers_-_May_25.pdf>)

There is a growing appreciation that the conflicts in the next century will most likely be fought over a lack of resources. Yet, in a sense, this is not new. Researchers point to the French and Russian revolutions as conflicts induced by a lack of food. More recently, Germany’s World War Two efforts are said to have been inspired, at least in part, by its perceived need to gain access to more food. Yet the general sense among those that attended FDI’s recent workshops, was that the scale of the problem in the future could be significantly greater as a result of population pressures, changing weather, urbanisation, migration, loss of arable land and other farm inputs, and increased affluence in the developing world.¶ In his book, Small Farmers Secure Food, Lindsay Falvey, a participant in FDI’s March 2012 workshop on the issue of food and conflict, clearly expresses the problem and why countries across the globe are starting to take note. .¶ He writes (p.36), “…if people are hungry, especially in cities, the state is not stable – riots, violence, breakdown of law and order and migration result.” “Hunger feeds anarchy.” This view is also shared by Julian Cribb, who in his book, The Coming Famine, writes that if “large regions of the world run short of food, land or water in the decades that lie ahead, then wholesale, bloody wars are liable to follow.” He continues: “An increasingly credible scenario for World War 3 is not so much a confrontation of super powers and their allies, as a festering, self-perpetuating chain of resource conflicts.” He also says: “The wars of the 21st Century are less likely to be global conflicts with sharply defined sides and huge armies, than a scrappy mass of failed states, rebellions, civil strife, insurgencies, terrorism and genocides, sparked by bloody competition over dwindling resources.” As another workshop participant put it, people do not go to war to kill; they go to war over resources, either to protect or to gain the resources for themselves. Another observed that hunger results in passivity not conflict. Conflict is over resources, not because people are going hungry. A study by the International Peace Research Institute indicates that where food security is an issue, it is more likely to result in some form of conflict. Darfur, Rwanda, Eritrea and the Balkans experienced such wars. Governments, especially in developed countries, are increasingly aware of this phenomenon.¶ The UK Ministry of Defence, the CIA, the US Center for Strategic and International Studies and the Oslo Peace Research Institute, all identify famine as a potential trigger for conflicts and possibly even nuclear war.

#### Best studies disprove defense

Koren 16 – Ore Koren, PhD Candidate at the University of Minnesota in Political Science and Former Jennings Randolph Peace Scholar at the United States Institute of Peace, & Benjamin E. Bagozzi, Assistant Professor in the Department of Political Science & International. Relations at the University of Delaware, “From Global to Local, Food Insecurity is Associated with Contemporary Armed Conflicts”, Food Security, October, Volume 8, Issue 5, https://link.springer.com/article/10.1007/s12571-016-0610-x

What do these findings indicate about the variation in the risk of conflict and civil conflict? Firstly, all four models support the argument that a significant relationship exists between food insecurity and conflict. More specifically, these findings suggest that, for an average country, the baseline risk of conflict and civil conflict increases in regions that provide at least some access to food – supporting the expectation that global demands for food should generally direct conflict towards agricultural areas. At the same time, within agricultural areas, conflict is intuitively more likely to arise in regions where the levels of food per capita are low – that is, where food supplies are scarce. Secondly, and in line with previous research (Burke et al. 2009; O’Loughlin et al. 2012; Hsiang and Meng 2014; Hendrix and Salehyan 2012), warmer regions and areas with lower precipitation were significantly more likely to experience conflict. This supports the argument that food scarcity can serve, to some extent, as a mediating factor for the effects of climate variables, in addition to the independent impact of food insecurity related concerns on conflict. Thirdly, as extant studies (e.g., Hegre and Sambanis 2006) suggest, poorer regions are more likely to experience conflict, as are more ethnically diverse regions, although it appears that higher levels of democracy do not translate into more peace once cell level characteristics are taken into account.3 Perhaps unsurprisingly, regions with larger populations are more likely to experience conflict, as are more rural regions, as some scholars have argued (Fearon and Laitin 2003; Kalyvas 2006; Buhaug et al. 2009).

In sum, four models involving different explanatory variables have been utilized to examine two conceptualizations of conflict as an outcome of interest. The results strongly support extant arguments that access to and availability of food are each associated with an increased occurrence of armed conflict. This evidence does not negate previous explanations of conflict that emphasize the importance of political and economic development or climactic variation. However, by highlighting the strong association between food access and availability on one hand, and local political violence on the other, the above findings do show that these past expositions (e.g. Miguel et al. 2004; Burke et al. 2009; Hsiang and Meng 2014) in and of themselves are insufficient to fully explain the likelihood of local level conflict. Simply put, the present study confirms that there exists a systematic, and global, relationship between food insecurity on one hand, and the occurrence and persistence of social conflict on the other.

Discussion

What do these findings imply about the effect of food insecurity and conflict? Naturally, even the most detailed and elaborate models are simplistic, especially when containing as diverse a range of observations as those examined above. Nevertheless, in terms of conditional probabilities, all models show a statistically significant first difference change of approximately +92 % in the probability of conflict when a high risk scenario is simulated for an average cell.4

The conditional probabilities discussed above highlight the inherent complexity of social systems, as a phenomenon as notable as violent conflict ultimately arises due to a variety of stressors. Therefore, it should be emphasized that the above findings should not be interpreted as explaining conflict onset. Conflict can erupt due to various political (Buhaug 2010; Fearon and Laitin 2003) or economic (Hegre and Sambanis 2006; Collier and Hoeffler 2005) reasons – which may or may not be related to food insecurity – that are beyond the scope of this paper. Rather, the present study more simply suggests that political violence will have a higher likelihood of concentrating in regions that (i) offer more access to food resources and (ii) face low levels of food availability within areas that offer some access to food resources.

This study adopts an economic perspective on food security to explain this variation in the concentration of social conflict. From the demand side, violent conflict is most likely to revolve primarily around access to food sources. When food insecurity produces higher demands for food, these demands will directly compel groups and individuals to seek out and fight over existing food resources, rather than leading these actors to pursue and fight over geographic areas that lack any (or have very little) agricultural resources. Thus, access to croplands and food is a necessary condition for food insecurity-induced conflict, which is confirmed in the cropland analyses presented here. From the supply side, and within those areas that do already offer access to agriculture and/or food, conflict is most likely to occur in regions that offer lower levels of food availability, or insufficient food supplies. This is because lower food availability (or supplies) in these contexts directly implies higher levels of resource scarcity, which can engender social grievances, and ultimately, social and political conflict (Brinkman and Hendrix 2011; Hendrix and Brinkman 2013). More broadly, several causal mechanisms could plausibly link food security and social conflict.

For one, conflict in regions with higher food access and lower availability might arise as a principal outcome of food insecurity. This approach is most directly in tune with the body of research concerned with the resource scarcity-based security implications of climate change (e.g. Miguel et al. 2004; Burke et al. 2009; O’Loughlin et al. 2012), as well as with broader studies of conflict dynamics and food security in both rural and urban contexts (Brinkman and Hendrix 2011; Hendrix and Brinkman 2013; Messer and Cohen 2006). From this perspective, individuals and groups actively fight with one another due to food insecurity-induced grievances, which may manifest in groups’ attempts to overthrow existing political structures, or in these actors’ efforts to more directly seize and control available (but scarce) agricultural resources in an effort to better guarantee long-term food security for their constituents. If future global projections for population growth, consumption, and climate change hold true, then these dynamics suggest that incidences of violent conflict over food scarcity and food insecurity may increase as individuals and groups fight over a continuously shrinking pool of resources, including food.

A second mechanism involves the existence of logistic support in conflict-prone regions, or lack thereof. Throughout history and well into the nineteenth century, armies living off the land have been a regular characteristic of warfare. The utilization of motorized transport vehicles and airlifts has significantly reduced the need of modern militaries to rely on local populations for support, at least among modernized, highly technological militaries (Kress 2002, 12–13). However, given the bureaucratic and economic capabilities required to maintain such systems, the majority of state and non-state armed groups in the developing world are still unlikely to be supported by well-developed logistic supply chains (Henk and Rupiya 2001). Taking into account the consistent relationship between economic welfare and conflict (Hegre and Sambanis 2006; Fearon and Laitin 2003), unsupported warring groups on all sides of a conflict may move into regions that offer more access to cropland in order to forage and pillage to support themselves, which in turn produces higher incidences of hostilities, especially if there is not much food per person available within these fertile regions. Hence, violent conflict in this case is not the direct result of food insecurity, but rather is shaped by food insecurity concerns. The identified relationships between food security and conflict are robust across numerous alternative model specifications, and imply an independent effect of food insecurity in shaping conflict dynamics and conflict risk. Especially when considered alongside current, and projected, climatic and political-economic conditions, this linkage suggests that countries could see an increase in localized conflict worldwide in the coming years. However, this anticipated trend should be considered with caution for several key reasons.

#### Second is Industrial Agriculture---conventional farming is unsustainable---it requires chemical inputs that destroy ecosystems and pollinators and bio-accumulate, risking extinction---a disruptive collapse is inevitable unless a transition to sustainable practices starts now

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We hear a lot about how we’re running out of antibiotics. But we are also doomed to run out of pesticides, because insects inevitably develop resistance, whether toxic chemicals are sprayed directly or genetically engineered into the plants.

Worse yet, weeds, insects, and fungus develop resistance in just 5 years on average, which has caused the chemicals to grow increasingly lethal over the past 60 years. And it takes on average eight to ten years to identify, test, and develop a new pesticide, though that isn’t long enough to discover the long-term toxicity to humans and other organisms.

And this devil’s bargain hasn’t even provided most of the gains in crop yields, which is due to natural-gas and phosphate fertilizers plus soil-crushing tractors and harvesters that can do the work of millions of men and horses quickly on farms that grow only one crop on thousands of acres.

Yet before pesticides, farmers lost a third of their crops to pests, after pesticides, farmers still lose a third of their crops.

Even without pesticides, industrial agriculture is doomed to fail from extremely high rates of soil erosion and soil compaction at rates that far exceed losses in the past, since soil couldn’t wash or blow away as easily on small farms that grew many crops.

But pest killing chemicals are surely accelerating the day of reckoning sooner rather than later. Enormous amounts of toxic chemicals are dumped on land every year — over 1 billion pounds are used in the United State (US) every year and 5.6 billion pounds globally (Alavanja 2009).

This destroys the very ecosystems that used to help plants fight off pests, and is a major factor biodiversity loss and extinction.

Evidence also points to pesticides playing a key role in the loss of bees and their pollination services. Although paleo-diet fanatics won’t mind eating mostly meat when fruit, vegetable, and nut crops are gone, they will not be so happy about having to eat more carbohydrates. Wheat and other grains will still be around, since they are wind-pollinated.

Agricultural chemicals render land lifeless and toxic to beneficial creatures, also killing the food chain above — fish, amphibians, birds, and humans (from cancer, chronic disease, and suicide).

Surely a day is coming when pesticides stop working, resulting in massive famines. But who is there to speak for the grandchildren? And those that do speak for them are mowed down by the logic of libertarian capitalism, which only cares about profits today. Given that a political party is now in power in the U.S. that wants to get rid of the protections the Environmental Protection Agency (EPA) and other agencies provide, may make matters worse if agricultural chemicals are allowed to be more toxic, long-lasting, and released earlier, before being fully tested for health effects.

Meanwhile chemical and genetic engineering companies are making a fortune, because the farmers have to pay full price, since the pests develop resistance long before a product is old enough to be made generically. Except for glyphosate, but weeds have developed resistance. Predictably.

In fact, the inevitability of resistance has been known for nearly seven decades. In 1951, as the world began using synthetic chemicals, Dr. Reginald Painter at Kansas State University published “Insect Resistance in Crop Plants”. He made a case that it would be better to understand how a crop plant fought off insects, since it was inevitable that insects would develop genetic or behavioral resistance. At best, chemicals might be used as an emergency control measure.

Farmers will say that we simply must carry on like this, there’s no other choice. But that’s simply not true.

Consider the corn rootworm, that costs farmers about $2 billion a year in lost crops despite spending hundreds of millions on chemicals and the hundreds of millions of dollars chemical companies spend developing new chemicals.

To lower the chances of corn pests developing resistance, corn crops were rotated with soybeans. Predictably, a few mutated to eat soybeans plus changed their behavior. They used to only lay eggs on nearby corn plants, now they disperse to lay eggs on soybean crops as well. Worse yet, corn is more profitable than soy and many farmers began growing continuous corn. Already the corn rootworm is developing resistance to the latest and greatest chemicals.

But the corn rootworm is not causing devastation in Europe, because farms are smaller and most farmers rotate not just soy, but wheat, alfalfa, sorghum and oats with corn (Nordhaus 2017).

Before planting, farmers try to get rid of pests that survived the winter and apply fumigants to kill fungi and nematodes, and pre-emergent chemicals to reduce weed seeds from emerging. Even farmers practicing no-till farming douse the land with herbicides by using GMO herbicide-resistant crops. Then over the course of crop growth, farmers may apply several rounds of additional pesticides to control different pests. For example, cotton growers apply chemicals from 12 to 30 times before harvest.

Currently, the potential harm is only assessed for 2 to 3 years before a permit is issued, even though the damage might occur up to 20 years later.

Although these chemicals appear to be just like antibiotics, that isn’t entirely true. We develop some immunity to a disease after antibiotics help us recover, but a plant is still vulnerable to the pests and weeds with the genetics or behavior to survive and chemical assault.

Although there are thousands of chemical toxins, what matters is how they kill, their method of action (MOA). For herbicides there are only 29 MOAs, for insecticides, just 28. So if a pest develops resistance to one chemical within an MOA, it will be resistant to all of the thousands of chemicals within that MOA.

The demand for chemicals has also grown due the high level of bioinvasive species. It takes a while to find native pests and make sure they won’t do more harm than good. In the 1950s there were just three main corn pests. By 1978 there were 40, and they vary regionally. For example, California has 30 arthropods and over 14 fungal diseases to cope with.

When I was learning how to grow food organically back in the 90s, I remember how outraged organic farmers were that Monsanto was going to genetically engineer plants to have the Bt bacteria in them. This is because the only insecticide organic farmers can use is Bt bacteria, because it is found in the soil. It’s natural. Organic farmers have been careful to spray only in emergencies so that insects didn’t develop resistance to their only remedy. Since 1996, GMO plants have been engineered to have Bt in them, and predictably, insects have developed resistance. For example, in 2015, 81% of all corn was planted with genetically engineered Bt. But corn earworms have developed resistance, especially in North Carolina and Georgia, setting the stage for damage across the nation. Five other insects have developed resistance to Bt as well.

GMO plants were also going to reduce pesticide use. They did for a while, but not for long. Chemical use has increased 7% to 202,000 tons a year in the past 10 years.

Resistance can come in other ways than mutations. Behavior can change. Cockroach bait is laced with glucose, so cockroaches that developed glucose-aversion now no longer take the bait.

It is worth repeating that chemicals and other practices are ruining the long-term viability of agriculture. Here is how author Dyer explains it:

“Ultimately the practice of modern farming is not sustainable” because “the damage to the soil and natural ecosystems is so great that farming becomes dependent not on the land but on the artificial inputs into the process, such as fertilizers and pesticides. In many ways, our battle against the diverse array of pest species is a battle against the health of the system itself. As we kill pest species, we also kill related species that may be beneficial. We kill predators that could assist our efforts. We reduce the ecosystem’s ability to recover due to reduced diversity, and we interfere with the organisms that affect the biogeochemical processes that maintain the soils in which the plants grow.

Soil is a complex, multifaceted living thing that is far more than the sum of the sand, silt, clay, fungi, microbes, nematodes, and other invertebrates. All biotic components interact as an ecosystem within the soil and at the surface, and in relation to the larger components such as herbivores that move across the land. Organisms grow and dig through the soil, aerate it, reorganize it, and add and subtract organic material. Mature soil is structured and layered and, very importantly, it remains in place. Plowing of the soil turns everything upside down. What was hidden from light is exposed. What was kept at a constant temperature is now varying with the day and night and seasons. What cannot tolerate drying conditions at the surface is likely killed. And very sensitive and delicate structures within the soil are disrupted and destroyed.

Conventional tillage disrupts the entire soil ecosystem. Tractors and farm equipment are large and heavy; they compact the soil, which removes air space and water-holding capacity. Wind and water erosion remove the smallest soil particles, which typically hold most of the micronutrients needed by plants. Synthetic fertilizers are added to supplement the loss of oil nutrients but often are relatively toxic to many soil organisms. And chemicals such as pre-emergents, fumigants, herbicides, insecticides, acaricides, fungicides, and defoliants eventually kill all but the most tolerant or resistant soil organisms. It does not take long to reduce a native, living, dynamic soil to a relatively lifeless collection of inorganic particles with little of the natural structure and function of undisturbed soil”.

When I told my husband all the reasons we use agricultural chemicals and the harm done, my husband got angry and said “Farmers aren’t stupid, that can’t be right!”

I think there are a number of reasons why farmers don’t go back to sustainable organic farming.

First, there is far too much money to be made in the chemical herbicide, pesticide, and insecticide industry to stop this juggernaut. After reading Lessig’s book “Republic, Lost”, one of the best, if not the best book on campaign finance reform, I despair of campaign financing ever happening. So chemical lobbyists will continue to donate enough money to politicians to maintain the status quo. Plus the chemical industry has infiltrated regulatory agencies via the revolving door for decades and is now in a position to assassinate the EPA, with newly appointed Scott Pruitt, who would like to get rid of the EPA.

Second, about half of farmers are hired guns. They don’t own the land and care about passing it on in good health to their children. They rent the land, and their goal, and the owner’s goal is for them to make as much profit as possible.

Third, renters and farmers both would lose money, maybe go out of business in the years it would take to convert an industrial monoculture farm to multiple crops rotated, or an organic farm.

Fourth, it takes time to learn to farm organically properly. So even if the farmer survives financially, mistakes will be made. Hopefully made up for by the higher price of organic food, but as wealth grows increasingly more unevenly distributed, and the risk of another economic crash grows (not to mention lack of reforms, being in more debt now than 2008, etc).

Fifth, industrial farming is what is taught at most universities. There are only a handful of universities that offer programs in organic agriculture.

Sixth, subsidies favor large farmers, who are also the only farmers who have the money to profit from economies of scale, and buy their own giant tractors to farm a thousand acres of monoculture crops. Industrial farming has driven 5 million farmers off the land who couldn’t compete with the profits made by larger farms in the area.

But farmers will have to go organic whether they like it or not

It’s hard to say whether this will happen because we’ve run out of pesticides, whether from resistance or a financial crash reducing new chemical research, or whether peak oil, peak coal, and peak natural gas will cause the decline of chemical farming. Agriculture uses about 15 to 20% of fossil fuel energy, from natural gas fertilizer, oil-based chemicals, farm vehicle and equipment fuel, the agricultural cold chain, distribution, packaging, refrigeration, and cooking to name a few of the uses.

At some point of fossil decline, there won’t be enough fuel or pesticides to continue business as usual.

Farmers will be forced to go organic at some point. Wouldn’t it be easier to start the transition now?

#### Consolidation halts that transition---2 internal links

#### First, Crowd-out---it leads to the replacement of small farms with large farms across industries

Kristen Tam and Olivia Bielskis 21, Researchers for UCLA Law Library, “Stimulating Antitrust Enforcement to Expand the Regenerative Agriculture Movement”, 4-1-21, UCLA Law Library, <https://escholarship.org/uc/item/0m16g2r5>

As defined by the United States Department of Agriculture (USDA), a “farm” is any place from which $1,000 or more of agricultural products were produced or sold during the year.11 This section discusses the historical and current consolidation trends in the agriculture marketplace for farms, meatpacking firms, and many other food corporations. I find that the overall number of farms has decreased while the size of each farm or firm has increased, and the number of farms in higher sales classes have increased along with their subsequent share of farmland.12 Farm numbers have decreased since the onset of the 20th century, however, due to Robert Bork and the Chicago School’s influence that prioritized economic efficiency and consumer prices over small businesses,13 the number of farms in the United States started decreasing at faster rates. In 1975, there were 2.5 million farms across the country,14 which declined by an average of 2.41 percent per year.1516 Comparatively, from 1980 to 1985, the number of farms decreased by an average of 6.15 percent per year,17 alluding to increased rates of consolidation. While farm numbers continue to decrease, output production size and the Gross Cash Farm Income (GCFI) of large farms has increased. From 2012 to 2018, the number of farms decreased from 2.11 to 2.03 million farms, while the average farm size increased from 429 to 443 acres.18 Specifically, the growth in land holdings has increased the greatest in the largest farms. In 1987, 57 percent of the United States cropland was operated by midsize farms with 100 to 999 acres of cropland while only 15 percent was operated by large farms over 2,000 acres.19 In 2012, cropland operated by midsize farms drastically decreased to 36 percent while cropland operated by large farms increased to 36 percent, more than doubling the figure from 1987.20 In addition to holding control of more land and market power, and decreasing competition in the marketplace, these larger farms hold a disproportionate majority of agricultural commodity profits. In 1991, small farms, defined as farms whose income is less than $350,000, took in 46 percent of agricultural profit, while in 2015, small farms took in only 25 percent of agricultural profit.21 Large farms, who make more than $1,000,000 held 31 percent of the GFCI in 1991, while in 2015, their share increased to 51 percent.22 The trend towards, seeing as the number of farms and packaging plants decrease while the number of animals raised per farm increases. From 1987 to 2017, there was a 28.50 percent decrease in the number of cow, pig and chicken farms.23 While the number of farms decreased, the midpoint numbers for the number of livestock per farm increased; where half of the livestock are above, and half are below it. In 1987, the midpoint number of cows for each livestock feeding industry was 80, while in 2012, this increased to 900, an increase of 1,025 percent.24 The number of meatpacking plants, consolidation is also prevalent in the livestock, poultry and meat packing industries where farmers sell their animals to be slaughtered, packaged, and distributed, also decreased which allows meatpackers to run roughshod over farmers by giving them power to pay their desired lower prices, disadvantaging farmers. Consolidation in other food industries is increasing as well, seeing as in 2012 four firms owned 89 percent of the peanut butter industry, a staggering figure which increased to 92 percent in 2017.25 In 2015 the two largest corn seed firms owned 78 percent of the market share,26 in 2017 the four largest jelly firms owned 85 percent of the industry,27 and in 2018, two firms owned 87 percent of the mayonnaise market share, a $1.6 billion dollar industry.28 These figures showing monopolization exemplify the formidable proportions to which the agriculture and food industry is consolidated. These trends underscore how the regulation mechanisms in place to promote competition and prevent monopolization are not working.

#### Second, Tech Lock-In---increasing reliance on technologies created by industrial ag create new path dependencies that make transition to sustainable tech impossible---it’s a linear risk

Jennifer Clapp 20, Canada Research Chair in Global Food Security and Sustainability and a professor in the School of Environment, Resources, and Sustainability at the University of Waterloo, “Precision Technologies for Agriculture: Digital Farming, Gene-Edited Crops, and the Politics of Sustainability,” Global Environment Politics, 20.3, https://direct.mit.edu/glep/article/20/3/49/95048/Precision-Technologies-for-Agriculture-Digital

Technological Lock-In

Key dynamics identified in the broader literature about technological lock-in—whereby technological systems develop along established pathways from which it is difficult and costly to deviate—are reflected in current debates over precision technologies for agriculture. Technological lock-in typically occurs when powerful social forces drive technological development in certain directions. These social forces are often the result of earlier events—technological, political, and psychological—that cement the societal dominance of certain technological systems over others (McKinnon 2019). This temporal nature of the process means that lock-in can become self-reinforcing over time and can ultimately crowd out other potential technological systems that might offer more benefits over the long run (Arthur 1989). In instances of lock-in, the cost of not adopting a new technology that fits into a dominant technological system can often be higher than the benefits of actually using that technology, even if there are better ways to resolve the problem (McKinnon 2019). In such situations, potential adopters typically make decisions about the costs of adopting (or not adopting) novel technologies in the short term, even in cases when the benefits of switching to a different system may be higher over the long term. This dynamic tends to give the momentum in debates regarding novel technology adoption to those voices that reinforce the dominant technological system while weakening the influence of those promoting alternative systems (Vanloqueren and Baret 2009).

The lens of technological lock-in helps shed light on the ways in which the structural context of the dominant agricultural system shapes the political dynamics surrounding current versus possible alternative systems in the debate over precision technologies. The current industrial model rose to dominance through historical patterns of progressive adoption of industrial agricultural technologies that established new path dependencies. The development of hybrid seeds in the 1920 and 1930s and the monoculture planting practices that accompanied them, for example, encouraged monocrop agriculture and the adoption of tractors to replace horses. When monocropping resulted in new vulnerabilities to insects and weeds in crop systems, the response was the adoption of agrochemical sprays to control those pests. Subsequently, agricultural biotechnology emerged as a means by which to address high levels of agrochemical use, by engineering crops to be resistant to pests or resistant to what were thought to be relatively benign herbicides, such as glyphosate (Sassenrath et al. 2008).

Although advocates promote precision technologies as part of a more sustainable trajectory, they are deeply enmeshed with elements of the established industrial agricultural system. Most of the corporate research into gene editing and variable-rate spraying equipment, for example, is focused on the use of these technologies in conjunction with herbicides—specifically glyphosate—which have already been locked into dominant agricultural practices. New precision technologies are also deeply enmeshed in the dominance of digital technology systems in society more broadly. The prevalence of and familiarity with digital technologies in society for nonfarming activities, such as for obtaining news and weather forecasts or social media, work to lock-in digital farming adoption by farmers. As farmers sign on to these new digitally linked farming technologies, their entrenchment in the industrial agriculture system to which most of those technologies are tethered only deepens. And as farmers become increasingly reliant on and skilled in the use of digital technologies to guide their farming decisions, lock-in becomes self-reinforcing, because farmers lose the ability to evaluate trade-offs and make decisions in the absence of digital assistance as well as the ability to repair their own digital equipment and machinery (Carolan 2018; Rotz et al. 2019).

#### Big Ag leads to ecological collapse---it destroys biodiversity, causes gulf hypoxia, and increases emissions

Matthew R. Sanderson and Stan Cox 19, social scientist at Kansas State University, research scholar in ecosphere studies at The Land Institute “Big Agriculture Is Leading to Ecological Collapse,” Foreign Policy, 10-14-2019, <https://foreignpolicy.com/2021/05/17/big-industrialized-agriculture-climate-change-earth-systems-ecological-collapse-policy/>

Today, there is more carbon dioxide in the atmosphere than at any point in the past [3.6 million years](https://research.noaa.gov/article/ArtMID/587/ArticleID/2742/Despite-pandemic-shutdowns-carbon-dioxide-and-methane-surged-in-2020). On April 5, atmospheric carbon dioxide exceeded [420 parts per million](https://www.esrl.noaa.gov/gmd/ccgg/trends/monthly.html)—marking nearly the halfway point toward doubling the carbon dioxide levels measured prior to the Industrial Revolution, a mere [171 years ago](https://www.ipcc.ch/site/assets/uploads/sites/2/2018/12/SR15_FAQ_Low_Res.pdf). Even amid a pandemic-induced economic shutdown—during which global annual emissions dropped [7 percent](https://research.noaa.gov/article/ArtMID/587/ArticleID/2742/Despite-pandemic-shutdowns-carbon-dioxide-and-methane-surged-in-2020)—carbon dioxide and methane levels set records in 2020. The last time Earth held this much carbon dioxide in its atmosphere, sea levels were nearly 80 feet higher and the planet was 7 degrees Fahrenheit warmer. The catch: Homo sapiens did not yet exist.

Change is in the air. U.S. Director of National Intelligence Avril Haines [announced](https://www.nytimes.com/live/2021/04/22/us/biden-earth-day-climate-summit) climate change is “at the center of the country’s national security and foreign policy.” Business-as-usual is no longer a viable strategy as more institutions consider a future that will look and feel much different. In this context, it is striking to read a recent piece in Foreign Policy arguing “[big agriculture is best](https://foreignpolicy.com/2021/04/18/big-agriculture-is-best/).”

“Big agriculture is best” cannot be an argument supported by empirical evidence. By now, it is vitally clear that Earth systems—the atmosphere, oceans, soils, and biosphere—are in [various phases of collapse](https://www.swissre.com/media/news-releases/nr-20200923-biodiversity-and-ecosystems-services.html), putting nearly [one-half of the world’s gross](https://www.swissre.com/media/news-releases/nr-20200923-biodiversity-and-ecosystems-services.html) domestic product at risk and [undermining the planet’s ability to support life](https://ipbes.net/global-assessment). And big, industrialized agriculture—promoted by U.S. foreign and domestic policy—lies at the heart of the multiple connected crises we are confronting as a species.

The litany of industrial agriculture’s toll is long and diverse. Consider the effects of industrial animal agriculture, for example. As of this writing, animal agriculture accounts for [14.5 percent](http://www.fao.org/news/story/en/item/197623/icode/) of total anthropogenic greenhouse gas emissions annually. It is also the source of 60 percent of all nitrous oxide and 50 percent of all methane emissions, which have [36 times and 298 times](https://www.epa.gov/ghgemissions/understanding-global-warming-potentials), respectively, the warming potential of carbon dioxide. As industrial animal agriculture has scaled up, agricultural emissions of methane and nitrous oxide have been going in [one direction only](https://www.ipcc.ch/site/assets/uploads/2018/02/ar4-wg3-chapter8-1.pdf): up.

Efforts to scale industrial agriculture are undermining the planet’s capacity to support life at more local scales too. Consider Brazil, home to the Amazon Rainforest, which makes up [40 percent](https://www.worldbank.org/en/news/feature/2019/05/22/why-the-amazons-biodiversity-is-critical-for-the-globe) of all remaining rainforest and 25 percent of all terrestrial biodiversity on Earth. Forest loss and species extinctions [have only increased](https://ipbes.net/sites/default/files/inline/files/ipbes_global_assessment_report_summary_for_policymakers.pdf) as industrial agriculture has scaled up in Brazil. Farmers are burning unprecedented amounts of forest to expand their operations in pursuit of an industrial model. In August 2019, [smoke blocked the sun in São Paulo](https://www.weforum.org/agenda/2019/08/amazon-burning-unseen-rate/), Brazil, 2,000 miles away from the fires in the state of Amazonas.

Efforts to scale industrial agriculture are undermining the planet’s capacity to support life.

In India, the pace of agricultural industrialization is hastening as indicated by [rising agricultural production](https://www.ers.usda.gov/mediaImport/1957187/err-203.pdf) and [declining employment in agriculture](https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=IN), which now accounts for less than one-half of India’s workforce. Agriculture has been scaled with all the tools of the Green Revolution: a high-input farming system comprised of genetically modified seeds and accompanying synthetic fertilizers and pesticides. As agriculture has industrialized in India, the use of [pesticides](http://ppqs.gov.in/statistical-database) and [fertilizers](https://pib.gov.in/PressReleseDetailm.aspx?PRID=1640400#:~:text=Production%20and%20Sales%2F%20consumption%20of%20Fertilisers%20comfortable&text=2019%2D20%20record%20high%20urea,previous%20year%20i.e.%202018%2D19.) has risen as well.

Although it has become more difficult to breathe the air in Brazil, it has become harder to find clean freshwater in India, where [pesticide contamination is rising](https://link.springer.com/article/10.1007/s10661-015-4287-y). There, the costs of the industrial agriculture model are plainly ecological and human: Unable to drink the water or pay back the loans they took out to finance their transition to industrial farming, an alarming number of Indian farmers are drinking pesticides instead. Almost a quarter-million Indian farmers have [died by suicide](http://www.isec.ac.in/farmer_suicides_An%20all%20India%20study-09Aug2017-revised.pdf) since 2000, and [10,281 farmers and farm laborers](https://www.nytimes.com/2020/09/08/world/asia/india-coronavirus-farmer-suicides-lockdown.html) killed themselves in 2019 alone. In Punjab, the country’s breadbasket, environmental destruction coexists with a raging opioid epidemic ensnaring nearly[two-thirds of households in the state](https://www.theguardian.com/global-development/2019/jul/01/the-indian-state-where-farmers-sow-the-seeds-of-death).

If the events in Brazil and India sound familiar to U.S. readers, it is because there are analogous stories in the United States—where industrial agriculture is rendering entire landscapes uninhabitable. The U.S. Corn Belt, which spans the region from Ohio to Nebraska, produces 75 percent of the country’s corn, but around [35 percent](https://www.pnas.org/content/118/8/e1922375118) of the region has completely lost its topsoil. Industrial agriculture has been pursued with special zeal in Iowa, where there are 25 million hogs and 3 million people. There, water from the Raccoon River enters the state capital of Des Moines—home to 550,000 people—with nitrates, phosphorus, and bacteria that have [exceeded federal safe water drinking standards](https://apnews.com/article/des-moines-lawsuits-courts-iowa-pollution-23798b7c9dfe04bc84f728ce92eeb4db).

At a larger scale, nutrient runoff from industrial agriculture in the U.S. Midwest has created an annual [dead zone](https://www.noaa.gov/media-release/noaa-forecasts-very-large-dead-zone-for-gulf-of-mexico)—a hypoxic area low in or devoid of oxygen—that is the size of Massachusetts. The ecological consequences of industrial agriculture manifest alongside a growing human toll. Rural communities are experiencing [rising suicide rates](https://www.washingtonpost.com/news/wonk/wp/2018/05/24/mapping-the-rising-tide-of-suicide-deaths-across-the-united-states/), especially [among young](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4551430/) people, along with increases in “[deaths of despair](https://www.nytimes.com/2020/01/09/opinion/sunday/deaths-despair-poverty.html)” from alcohol and drugs—an expanding human dead zone.

From suffering U.S. farmers to the pain inflicted on the developing world, everything about U.S. agriculture policy is dysfunctional. The next administration can do better.

Although tragic, these outcomes are neither inevitable nor natural. They are outcomes of U.S. policy choices. Industrialized agriculture has been a hallmark of U.S. foreign policy in the post-World War II era. Under the guise of [development for all](https://avalon.law.yale.edu/20th_century/truman.asp) and the mantra of “[feed the world](https://share.america.gov/u-s-farmers-feed-world/),” the United States has used policy to [dump surplus grain](https://www.cambridge.org/core/journals/renewable-agriculture-and-food-systems/article/true-costs-of-us-agricultural-dumping/ABDB3E76865636EF025C72D94FEECD32) in low-income countries—undermining markets for smallholder farmers—and cultivate foreign markets as importers of high-input, industrial agriculture technologies to scale agriculture. At home, federal policy since the 1970s has explicitly promoted scaling industrial agriculture through the “[get big or get out](https://grist.org/article/the-butz-stops-here/)” imperative.

Society did not arrive at this precipice because agriculture was too small or because industrialized agriculture respected the laws of physics. Instead, we are peering into an abyss of systemic socioecological collapse because every effort has been made to use industrialization to break through all known ecological and human limitations to scaling agriculture.

Industrial agriculture simplifies ecosystems, rendering us more vulnerable to threats. Transformative policies will be required to pull us back from the edge. As a start, the United States could set an example for the Global North with a [50-year farm bill](https://www.nytimes.com/2009/01/05/opinion/05berry.html).

Industrial agriculture simplifies ecosystems, rendering us more vulnerable to threats.

The bill would promote ecosystem diversification and increased resilience by reducing acreage of annual grain crops from 70 percent to 10 percent or less of all cropland while scaling up [perennial crops](https://science.sciencemag.org/content/328/5986/1638) to 80 percent of farmland. The remaining 10 percent would be allocated to other crops, including a diverse array of locally produced vegetables and fruits. Soil and water-conserving perennial varieties of rice, wheat, legumes, and other food-grain crops—which are [now being developed](https://www.cambridge.org/core/journals/global-sustainability/article/is-the-future-of-agriculture-perennial-imperatives-and-opportunities-to-reinvent-agriculture-by-shifting-from-annual-monocultures-to-perennial-polycultures/0F69B1DBF3493462B4D46EB8F0F541EE)—could serve as components of diverse, perennial, multispecies communities of food crops that replicate how nature functions. The bill would promote a transition to smaller, more diverse farm operations as agricultural diversification will work most effectively not on vast, uniform acreages but as mosaics made up of many modest-sized farms.

The bill would be an important step toward returning home as a species that once again lives within context—within limits, [perennially](https://www.resilience.org/stories/2020-12-08/transforming-life-on-our-home-planet-perennially/). Our collective pursuit of “big is best” led us out of context to our peril.

In the face of multiple cascading socioecological crises, Candide, published by the French writer Voltaire in 1759, shows us a way forward. Candide, the book’s protagonist, is mentored by Pangloss, a professor who holds a [Leibnizian optimism](https://plato.stanford.edu/entries/leibniz/) about the world that justifies the status quo as being “all for the best” in the “best of all possible worlds.”

#### Collapse of biodiversity causes extinction

Dr. Luiz Marques 20, PhD in Entomology, Associate Professor of Environmental History in the Department of History at the University of Campinas, Capitalism and Environmental Collapse, p. 247-248

Numerous scholars from various fields of science today are concerned with the ongoing collapse of biodiversity. The first Global Assessment of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES),1 published in 2019, estimates that:

The rate of global change in nature during the past 50 years is unprecedented in human history (…) Human actions threaten more species with global extinction now than ever before. (…) An average of around 25% of species in assessed animal and plant groups are threatened, suggesting that around 1 million species already face extinction, many within decades, unless action is taken to reduce the intensity of drivers of biodiversity loss.

Societies’ very survival depends on their ability to avert the impending threat of biological annihilation via the ongoing sixth mass extinction of species, triggered or intensified by the globalization of capitalism over the last 50 years. Sir Robert Watson, Chair of IPBES (2016), doesn’t mince his words to say what is at stake: “We are eroding the very foundations of our economies, livelihoods, food security, health and quality of life worldwide.” There is no hyperbole in the claim that the collapse of biodiversity and the acceleration of global warming, two processes that interact in synergy, entail an increasing risk of extinction for the Homo sapiens. As pointed out by Cristiana Paşca Palmer, Executive Secretary of the Convention on Biodiversity (2018), “I hope we aren’t the first species to document our own extinction.” Julia Marton-Lefèvre, former Director General of the International Union for Conservation of Nature (IUCN), reiterates this warning for the umpteenth time in a statement to delegations meeting at Rio+20 in 2012:

Sustainability is a matter of life and death for people on the planet. A sustainable future cannot be achieved without conserving biological diversity—animal and plant species, their habitats and their genes—not only for nature itself, but also for all 7 billion people who depend on it.

10.1 Defaunation and Biological Annihilation

Rodolfo Dirzo, Mauro Galetti, Ben Collen, and other co-authors of a review titled “Defaunation in the Anthropocene” (2014) conceptualize one of the central aspects of the current sixth mass extinction of species: the term defaunation is used to denote the loss of both species and populations of wildlife, as well as local declines in abundance of individuals. The defaunation process is in full swing:

In the past 500 years, humans have triggered a wave of extinction, threat, and local population declines that may be comparable in both rate and magnitude with the five previous mass extinctions of Earth’s history. Similar to other mass extinction events, the effects of this “sixth extinction wave” extend across taxonomic groups, but they are also selective, with some taxonomic groups and regions being particularly affected. (…) So profound is this problem that we have applied the term “defaunation” to describe it.

In a 2017 article, Gerardo Ceballos, Paul Ehrlich, and, again, Rodolfo Dirzo warn about the false impression that the threat of biological annihilation is not imminent:

The strong focus on species extinctions, a critical aspect of the contemporary pulse of biological extinction, leads to a common misimpression that Earth’s biota is not immediately threatened, just slowly entering an episode of major biodiversity loss. This view overlooks the current trends of population declines and extinctions. Using a sample of 27,600 terrestrial vertebrate species, and a more detailed analysis of 177 mammal species, we show the extremely high degree of population decay in vertebrates, even in common “species of low concern.” Dwindling population sizes and range shrinkages amount to a massive anthropogenic erosion of biodiversity and of the ecosystem services essential to civilization. This “biological annihilation” underlines the seriousness for humanity of Earth’s ongoing sixth mass extinction event.

#### That is the only egalitarian metric---anything else collapses cooperation on collective action crises and makes extinction inevitable

Khan 18 (Risalat, activist and entrepreneur from Bangladesh passionate about addressing climate change, biodiversity loss, and other existential challenges. He was featured by The Guardian as one of the “young climate campaigners to watch” (2015). As a campaigner with the global civic movement Avaaz (2014-17), Risalat was part of a small core team that spearheaded the largest climate marches in history with a turnout of over 800,000 across 2,000 cities. After fighting for the Paris Agreement, Risalat led a campaign joined by over a million people to stop the Rampal coal plant in Bangladesh to protect the Sundarbans World Heritage forest, and elicited criticism of the plant from Crédit Agricolé through targeted advocacy. Currently, Risalat is pursuing an MPA in Environmental Science and Policy at Columbia University as a SIPA Environmental Fellow, “5 reasons why we need to start talking about existential risks,” https://www.weforum.org/agenda/2018/01/5-reasons-start-talking-existential-risks-extinction-moriori/)

Infinite future possibilities I find the story of the Moriori profound. It teaches me two lessons. Firstly, that human culture is far from immutable. That we can struggle against our baser instincts. That we can master them and rise to unprecedented challenges. Secondly, that even this does not make us masters of our own destiny. We can make visionary choices, but the future can still surprise us. This is a humbling realization. Because faced with an uncertain future, the only wise thing we can do is prepare for possibilities. Standing at the launch pad of the Fourth Industrial Revolution, the possibilities seem endless. They range from an era of abundance to the end of humanity, and everything in between. How do we navigate such a wide and divergent spectrum? I am an optimist. From my bubble of privilege, life feels like a rollercoaster ride full of ever more impressive wonders, even as I try to fight the many social injustices that still blight us. However, the accelerating pace of change amid uncertainty elicits one fundamental observation. Among the infinite future possibilities, only one outcome is truly irreversible: extinction. Concerns about extinction are often dismissed as apocalyptic alarmism. Sometimes, they are. But repeating that mankind is still here after 70 years of existential warning about nuclear warfare is a straw man argument. The fact that a 1000-year flood has not happened does not negate its possibility. And there have been far too many nuclear near-misses to rest easy. As the World Economic Forum’s Annual Meeting in Davos discusses how to create a shared future in a fractured world, here are five reasons why the possibility of existential risks should raise the stakes of conversation: 1. Extinction is the rule, not the exception More than 99.9% of all the species that ever existed are gone. Deep time is unfathomable to the human brain. But if one cares to take a tour of the billions of years of life’s history, we find a litany of forgotten species. And we have only discovered a mere fraction of the extinct species that once roamed the planet. In the speck of time since the first humans evolved, more than 99.9% of all the distinct human cultures that have ever existed are extinct. Each hunter-gatherer tribe had its own mythologies, traditions and norms. They wiped each other out, or coalesced into larger formations following the agricultural revolution. However, as major civilizations emerged, even those that reached incredible heights, such as the Egyptians and the Romans, eventually collapsed. It is only in the very recent past that we became a truly global civilization. Our interconnectedness continues to grow rapidly. “Stand or fall, we are the last civilization”, as Ricken Patel, the founder of the global civic movement Avaaz, put it. 2. Environmental pressures can drive extinction More than 15,000 scientists just issued a ‘warning to humanity’. They called on us to reduce our impact on the biosphere, 25 years after their first such appeal. The warning notes that we are far outstripping the capacity of our planet in all but one measure of ozone depletion, including emissions, biodiversity, freshwater availability and more. The scientists, not a crowd known to overstate facts, conclude: “soon it will be too late to shift course away from our failing trajectory, and time is running out”. In his 2005 book Collapse, Jared Diamond charts the history of past societies. He makes the case that overpopulation and resource use beyond the carrying capacity have often been important, if not the only, drivers of collapse. Even though we are making important incremental progress in battles such as climate change, we must still achieve tremendous step changes in our response to several major environmental crises. We must do this even while the world’s population continues to grow. These pressures are bound to exert great stress on our global civilization. 3. Superintelligence: unplanned obsolescence? Imagine a monkey society that foresaw the ascendance of humans. Fearing a loss of status and power, it decided to kill the proverbial Adam and Eve. It crafted the most ingenious plan it could: starve the humans by taking away all their bananas. Foolproof plan, right? This story describes the fundamental difficulty with superintelligence. A superintelligent being may always do something entirely different from what we, with our mere mortal intelligence, can foresee. In his 2014 book Superintelligence, Swedish philosopher Nick Bostrom presents the challenge in thought-provoking detail, and advises caution. Bostrom cites a survey of industry experts that projected a 50% chance of the development of artificial superintelligence by 2050, and a 90% chance by 2075. The latter date is within the life expectancy of many alive today. Visionaries like Stephen Hawking and Elon Musk have warned of the existential risks from artificial superintelligence. Their opposite camp includes Larry Page and Mark Zuckerberg. But on an issue that concerns the future of humanity, is it really wise to ignore the guy who explained the nature of space to us and another guy who just put a reusable rocket in it? 4. Technology: known knowns and unknown unknowns Many fundamentally disruptive technologies are coming of age, from bioengineering to quantum computing, 3-D printing, robotics, nanotechnology and more. Lord Martin Rees describes potential existential challenges from some of these technologies, such as a bioengineered pandemic, in his book Our Final Century. Imagine if North Korea, feeling secure in its isolation, could release a virulent strain of Ebola, engineered to be airborne. Would it do it? Would ISIS? Projecting decades forward, we will likely develop capabilities that are unthinkable even now. The unknown unknowns of our technological path are profoundly humbling. 5. 'The Trump Factor' Despite our scientific ingenuity, we are still a confused and confusing species. Think back to two years ago, and how you thought the world worked then. Has that not been upended by the election of Donald Trump as US President, and everything that has happened since? The mix of billions of messy humans will forever be unpredictable. When the combustible forces described above are added to this melee, we find ourselves on a tightrope. What choices must we now make now to create a shared future, in which we are not at perpetual risk of destroying ourselves? Common enemy to common cause Throughout history, we have rallied against the ‘other’. Tribes have overpowered tribes, empires have conquered rivals. Even today, our fiercest displays of unity typically happen at wartime. We give our lives for our motherland and defend nationalistic pride like a wounded lion. But like the early Morioris, we 21st-century citizens find ourselves on an increasingly unstable island. We may have a violent past, but we have no more dangerous enemy than ourselves. Our task is to find our own Nunuku’s Law. Our own shared contract, based on equity, would help us navigate safely. It would ensure a future that unleashes the full potential of our still-budding human civilization, in all its diversity. We cannot do this unless we are humbly grounded in the possibility of our own destruction. Survival is life’s primal instinct. In the absence of a common enemy, we must find common cause in survival. Our future may depend on whether we realize this.

#### Extinction outweighs---it’s the upmost moral evil and disavowal of the risk makes it more likely.

Burns 17 (Elizabeth Finneron-Burns is a Teaching Fellow at the University of Warwick and an Affiliated Researcher at the Institute for Futures Studies in Stockholm, What’s wrong with human extinction?, <http://www.tandfonline.com/doi/pdf/10.1080/00455091.2016.1278150?needAccess=true>, Canadian Journal of Philosophy, 2017)

Many, though certainly not all, people might believe that it would be wrong to bring about the end of the human species, and the reasons given for this belief are various. I begin by considering four reasons that could be given against the moral permissibility of human extinction. I will argue that only those reasons that impact the people who exist at the time that the extinction or the knowledge of the upcoming extinction occurs, can explain its wrongness. I use this conclusion to then consider in which cases human extinction would be morally permissible or impermissible, arguing that there is only a small class of cases in which it would not be wrong to cause the extinction of the human race or allow it to happen. 2.1. It would prevent the existence of very many happy people One reason of human extinction might be considered to be wrong lies in the value of human life itself. The thought here might be that it is a good thing for people to exist and enjoy happy lives and extinction would deprive more people of enjoying this good. The ‘good’ in this case could be understood in at least two ways. According to the first, one might believe that you benefit a person by bringing them into existence, or at least, that it is good for that person that they come to exist. The second view might hold that if humans were to go extinct, the utility foregone by the billions (or more) of people who could have lived but will now never get that opportunity, renders allowing human extinction to take place an incidence of wrongdoing. An example of this view can be found in two quotes from an Effective Altruism blog post by Peter Singer, Nick Beckstead and Matt Wage: One very bad thing about human extinction would be that billions of people would likely die painful deaths. But in our view, this is by far not the worst thing about human extinction. The worst thing about human extinction is that there would be no future generations. Since there could be so many generations in our future, the value of all those generations together greatly exceeds the value of the current generation. (Beckstead, Singer, and Wage 2013) The authors are making two claims. The first is that there is value in human life and also something valuable about creating future people which gives us a reason to do so; furthermore, it would be a very bad thing if we did not do so. The second is that, not only would it be a bad thing for there to be no future people, but it would actually be the worst thing about extinction. Since happy human lives have value, and the number of potential people who could ever exist is far greater than the number of people who exist at any one time, even if the extinction were brought about through the painful deaths of currently existing people, the former’s loss would be greater than the latter’s. Both claims are assuming that there is an intrinsic value in the existence of potential human life. The second claim makes the further assumption that the forgone value of the potential lives that could be lived is greater than the disvalue that would be accrued by people existing at the time of the extinction through suffering from painful and/or premature deaths. The best-known author of the post, Peter Singer is a prominent utilitarian, so it is not surprising that he would lament the potential lack of future human lives per se. However, it is not just utilitarians who share this view, even if implicitly. Indeed, other philosophers also seem to imply that they share the intuition that there is just something wrong with causing or failing to prevent the extinction of the human species such that we prevent more ‘people’ from having the ‘opportunity to exist’. Stephen Gardiner (2009) and Martin O’Neill (personal correspondence), both sympathetic to contract theory, for example, also find it intuitive that we should want more generations to have the opportunity to exist, assuming that they have worth-living lives, and I find it plausible to think that many other people (philosophers and non-philosophers alike) probably share this intuition. When we talk about future lives being ‘prevented’, we are saying that a possible person or a set of possible people who could potentially have existed will now never actually come to exist. To say that it is wrong to prevent people from existing could either mean that a possible person could reasonably reject a principle that permitted us not to create them, or that the foregone value of their lives provides a reason for rejecting any principle that permits extinction. To make the first claim we would have to argue that a possible person could reasonably reject any principle that prevented their existence on the grounds that it prevented them in particular from existing. However, this is implausible for two reasons. First, we can only wrong someone who did, does or will actually exist because wronging involves failing to take a person’s interests into account. When considering the permissibility of a principle allowing us not to create Person X, we cannot take X’s interest in being created into account because X will not exist if we follow the principle. By considering the standpoint of a person in our deliberations we consider the burdens they will have to bear as a result of the principle. In this case, there is no one who will bear any burdens since if the principle is followed (that is, if we do not create X), X will not exist to bear any burdens. So, only people who do/will actually exist can bear the brunt of a principle, and therefore occupy a standpoint that is owed justification. Second, existence is not an interest at all and a possible person is not disadvantaged by not being caused to exist. Rather than being an interest, it is a necessary requirement in order to have interests. Rivka Weinberg describes it as ‘neutral’ because causing a person to exist is to create a subject who can have interests; existence is not an interest itself.3 In order to be disadvantaged, there must be some detrimental effect on your interests. However, without existence, a person does not have any interests so they cannot be disadvantaged by being kept out of existence. But, as Weinberg points out, ‘never having interests itself could not be contrary to people’s interests since without interest bearers, there can be no ‘they’ for it to be bad for’ (Weinberg 2008, 13). So, a principle that results in some possible people never becoming actual does not impose any costs on those ‘people’ because nobody is disadvantaged by not coming into existence.4 It therefore seems that it cannot be wrong to fail to bring particular people into existence. This would mean that no one acts wrongly when they fail to create another person. Writ large, it would also not be wrong if everybody decided to exercise their prerogative not to create new people and potentially, by consequence, allow human extinction. One might respond here by saying that although it may be permissible for one person to fail to create a new person, it is not permissible if everyone chooses to do so because human lives have value and allowing human extinction would be to forgo a huge amount of value in the world. This takes us to the second way of understanding the potential wrongness of preventing people from existing — the foregone value of a life provides a reason for rejecting any principle that prevents it. One possible reply to this claim turns on the fact that many philosophers acknowledge that the only, or at least the best, way to think about the value of (individual or groups of) possible people’s lives is in impersonal terms (Parfit 1984; Reiman 2007; McMahan 2009). Jeff McMahan, for example, writes ‘at the time of one’s choice there is no one who exists or will exist independently of that choice for whose sake one could be acting in causing him or her to exist … it seems therefore that any reason to cause or not to cause an individual to exist … is best considered an impersonal rather than individual-affecting reason’ (McMahan 2009, 52). Another reply along similar lines would be to appeal to the value that is lost or at least foregone when we fail to bring into existence a next (or several next) generations of people with worth-living lives. Since ex hypothesi worth-living lives have positive value, it is better to create more such lives and worse to create fewer. Human extinction by definition is the creation of no future lives and would ‘deprive’ billions of ‘people’ of the opportunity to live worth-living lives. This might reduce the amount of value in the world at the time of the extinction (by killing already existing people), but it would also prevent a much vaster amount of value in the future (by failing to create more people). Both replies depend on the impersonal value of human life. However, recall that in contractualism impersonal values are not on their own grounds for reasonably rejecting principles. Scanlon himself says that although we have a strong reason not to destroy existing human lives, this reason ‘does not flow from the thought that it is a good thing for there to be more human life rather than less’ (104). In contractualism, something cannot be wrong unless there is an impact on a person. Thus, neither the impersonal value of creating a particular person nor the impersonal value of human life writ large could on its own provide a reason for rejecting a principle permitting human extinction. It seems therefore that the fact that extinction would deprive future people of the opportunity to live worth-living lives (either by failing to create either particular future people or future people in general) cannot provide us with a reason to consider human extinction to be wrong. Although the lost value of these ‘lives’ itself cannot be the reason explaining the wrongness of extinction, it is possible the knowledge of this loss might create a personal reason for some existing people. I will consider this possibility later on in section (d). But first I move to the second reason human extinction might be wrong per se. 2.2. It would mean the loss of the only known form of intelligent life and all civilization and intellectual progress would be lost A second reason we might think it would be wrong to cause human extinction is the loss that would occur of the only (known) form of rational life and the knowledge and civilization that that form of life has created. One thought here could be that just as some might consider it wrong to destroy an individual human heritage monument like the Sphinx, it would also be wrong if the advances made by humans over the past few millennia were lost or prevented from progressing. A related argument is made by those who feel that there is something special about humans’ capacity for rationality which is valuable in itself. Since humans are the only intelligent life that we know of, it would be a loss, in itself, to the world for that to end. I admit that I struggle to fully appreciate this thought. It seems to me that Henry Sidgwick was correct in thinking that these things are only important insofar as they are important to humans (Sidgwick 1874, I.IX.4).5 If there is no form of intelligent life in the future, who would there be to lament its loss since intelligent life is the only form of life capable of appreciating intelligence? Similarly, if there is no one with the rational capacity to appreciate historic monuments and civil progress, who would there be to be negatively affected or even notice the loss?6 However, even if there is nothing special about human rationality, just as some people try to prevent the extinction of nonhuman animal species, we might think that we ought also to prevent human extinction for the sake of biodiversity. The thought in this, as well as the earlier examples, must be that it would somehow be bad for the world if there were no more humans even though there would be no one for whom it is bad. This may be so but the only way to understand this reason is impersonally. Since we are concerned with wrongness rather than badness, we must ask whether something that impacts no one’s well-being, status or claims can be wrong. As we saw earlier, in the contractualist framework reasons must be personal rather than impersonal in order to provide grounds for reasonable rejection (Scanlon 1998, 218–223). Since the loss of civilization, intelligent life or biodiversity are per se impersonal reasons, there is no standpoint from which these reasons could be used to reasonably reject a principle that permitted extinction. Therefore, causing human extinction on the grounds of the loss of civilization, rational life or biodiversity would not be wrong. 2.3. Existing people would endure physical pain and/or painful and/or premature deaths Thinking about the ways in which human extinction might come about brings to the fore two more reasons it might be wrong. It could, for example, occur if all humans (or at least the critical number needed to be unable to replenish the population, leading to eventual extinction) underwent a sterilization procedure. Or perhaps it could come about due to anthropogenic climate change or a massive asteroid hitting the Earth and wiping out the species in the same way it did the dinosaurs millions of years ago. Each of these scenarios would involve significant physical and/or non-physical harms to existing people and their interests. Physically, people might suffer premature and possibly also painful deaths, for example. It is not hard to imagine examples in which the process of extinction could cause premature death. A nuclear winter that killed everyone or even just every woman under the age of 50 is a clear example of such a case. Obviously, some types of premature death themselves cannot be reasons to reject a principle. Every person dies eventually, sometimes earlier than the standard expected lifespan due to accidents or causes like spontaneously occurring incurable cancers. A cause such as disease is not a moral agent and therefore it cannot be wrong if it unavoidably kills a person prematurely. Scanlon says that the fact that a principle would reduce a person’s well-being gives that person a reason to reject the principle: ‘components of well-being figure prominently as grounds for reasonable rejection’ (Scanlon 1998, 214). However, it is not settled yet whether premature death is a setback to well-being. Some philosophers hold that death is a harm to the person who dies, whilst others argue that it is not.7 I will argue, however, that regardless of who is correct in that debate, being caused to die prematurely can be reason to reject a principle when it fails to show respect to the person as a rational agent. Scanlon says that recognizing others as rational beings with interests involves seeing reason to preserve life and prevent death: ‘appreciating the value of human life is primarily a matter of seeing human lives as something to be respected, where this involves seeing reasons not to destroy them, reasons to protect them, and reasons to want them to go well’ (Scanlon 1998, 104). The ‘respect for life’ in this case is a respect for the person living, not respect for human life in the abstract. This means that we can sometimes fail to protect human life without acting wrongfully if we still respect the person living. Scanlon gives the example of a person who faces a life of unending and extreme pain such that she wishes to end it by committing suicide. Scanlon does not think that the suicidal person shows a lack of respect for her own life by seeking to end it because the person whose life it is has no reason to want it to go on. This is important to note because it emphasizes the fact that the respect for human life is person-affecting. It is not wrong to murder because of the impersonal disvalue of death in general, but because taking someone’s life without their permission shows disrespect to that person. This supports its inclusion as a reason in the contractualist formula, regardless of what side ends up winning the ‘is death a harm?’ debate because even if death turns out not to harm the person who died, ending their life without their consent shows disrespect to that person. A person who could reject a principle permitting another to cause his or her premature death presumably does not wish to die at that time, or in that manner. Thus, if they are killed without their consent, their interests have not been taken into account, and they have a reason to reject the principle that allowed their premature death.8 This is as true in the case of death due to extinction as it is for death due to murder. However, physical pain may also be caused to existing people without killing them, but still resulting in human extinction. Imagine, for example, surgically removing everyone’s reproductive organs in order to prevent the creation of any future people. Another example could be a nuclear bomb that did not kill anyone, but did painfully render them infertile through illness or injury. These would be cases in which physical pain (through surgery or bombs) was inflicted on existing people and the extinction came about as a result of the painful incident rather than through death. Furthermore, one could imagine a situation in which a bomb (for example) killed enough people to cause extinction, but some people remained alive, but in terrible pain from injuries. It seems uncontroversial that the infliction of physical pain could be a reason to reject a principle. Although Scanlon says that an impact on well-being is not the only reason to reject principles, it plays a significant role, and indeed, most principles are likely to be rejected due to a negative impact on a person’s well-being, physical or otherwise. It may be queried here whether it is actually the involuntariness of the pain that is grounds for reasonable rejection rather than the physical pain itself because not all pain that a person suffers is involuntary. One can imagine acts that can cause physical pain that are not rejectable — base jumping or life-saving or improving surgery, for example. On the other hand, pushing someone off a cliff or cutting him with a scalpel against his will are clearly rejectable acts. The difference between the two cases is that in the former, the person having the pain inflicted has consented to that pain or risk of pain. My view is that they cannot be separated in these cases and it is involuntary physical pain that is the grounds for reasonable rejection. Thus, the fact that a principle would allow unwanted physical harm gives a person who would be subjected to that harm a reason to reject the principle. Of course the mere fact that a principle causes involuntary physical harm or premature death is not sufficient to declare that the principle is rejectable — there might be countervailing reasons. In the case of extinction, what countervailing reasons might be offered in favour of the involuntary physical pain/ death-inducing harm? One such reason that might be offered is that humans are a harm to the natural environment and that the world might be a better place if there were no humans in it. It could be that humans might rightfully be considered an all-things-considered hindrance to the world rather than a benefit to it given the fact that we have been largely responsible for the extinction of many species, pollution and, most recently, climate change which have all negatively affected the natural environment in ways we are only just beginning to understand. Thus, the fact that human extinction would improve the natural environment (or at least prevent it from degrading further), is a countervailing reason in favour of extinction to be weighed against the reasons held by humans who would experience physical pain or premature death. However, the good of the environment as described above is by definition not a personal reason. Just like the loss of rational life and civilization, therefore, it cannot be a reason on its own when determining what is wrong and countervail the strong personal reasons to avoid pain/death that is held by the people who would suffer from it.9 Every person existing at the time of the extinction would have a reason to reject that principle on the grounds of the physical pain they are being forced to endure against their will that could not be countervailed by impersonal considerations such as the negative impact humans may have on the earth. Therefore, a principle that permitted extinction to be accomplished in a way that caused involuntary physical pain or premature death could quite clearly be rejectable by existing people with no relevant countervailing reasons. This means that human extinction that came about in this way would be wrong. There are of course also additional reasons they could reject a similar principle which I now turn to address in the next section. 2.4. Existing people could endure non-physical harms I said earlier than the fact in itself that there would not be any future people is an impersonal reason and can therefore not be a reason to reject a principle permitting extinction. However, this impersonal reason could give rise to a personal reason that is admissible. So, the final important reason people might think that human extinction would be wrong is that there could be various deleterious psychological effects that would be endured by existing people having the knowledge that there would be no future generations. There are two main sources of this trauma, both arising from the knowledge that there will be no more people. The first relates to individual people and the undesired negative effect on well-being that would be experienced by those who would have wanted to have children. Whilst this is by no means universal, it is fair to say that a good proportion of people feel a strong pull towards reproduction and having their lineage continue in some way. Samuel Scheffler describes the pull towards reproduction as a ‘desire for a personalized relationship with the future’ (Scheffler 2012, 31). Reproducing is a widely held desire and the joys of parenthood are ones that many people wish to experience. For these people knowing that they would not have descendants (or that their descendants will endure painful and/or premature deaths) could create a sense of despair and pointlessness of life. Furthermore, the inability to reproduce and have your own children because of a principle/policy that prevents you (either through bans or physical interventions) would be a significant infringement of what we consider to be a basic right to control what happens to your body. For these reasons, knowing that you will have no descendants could cause significant psychological traumas or harms even if there were no associated physical harm. The second is a more general, higher level sense of hopelessness or despair that there will be no more humans and that your projects will end with you. Even those who did not feel a strong desire to procreate themselves might feel a sense of hopelessness that any projects or goals they have for the future would not be fulfilled. Many of the projects and goals we work towards during our lifetime are also at least partly future-oriented. Why bother continuing the search for a cure for cancer if either it will not be found within humans’ lifetime, and/or there will be no future people to benefit from it once it is found? Similar projects and goals that might lose their meaning when confronted with extinction include politics, artistic pursuits and even the type of philosophical work with which this paper is concerned. Even more extreme, through the words of the character Theo Faron, P.D. James says in his novel The Children of Men that ‘without the hope of posterity for our race if not for ourselves, without the assurance that we being dead yet live, all pleasures of the mind and senses sometimes seem to me no more than pathetic and crumbling defences shored up against our ruins’ (James 2006, 9). Even if James’ claim is a bit hyperbolic and all pleasures would not actually be lost, I agree with Scheffler in finding it not implausible that the knowledge that extinction was coming and that there would be no more people would have at least a general depressive effect on people’s motivation and confidence in the value of and joy in their activities (Scheffler 2012, 43). Both sources of psychological harm are personal reasons to reject a principle that permitted human extinction. Existing people could therefore reasonably reject the principle for either of these reasons. Psychological pain and the inability to pursue your personal projects, goals, and aims, are all acceptable reasons for rejecting principles in the contractualist framework. So too are infringements of rights and entitlements that we accept as important for people’s lives. These psychological reasons, then, are also valid reasons to reject principles that permitted or required human extinction.

#### The United States federal government should establish a structural presumption against agricultural mergers.

#### The plan’s market wide approach solves---it changes the institutional and legal framework for evaluating mergers

Peter Carstensen et al 08, PROFESSOR OF LAW, UNIVERSITY OF WISCONSIN LAW SCHOOL, MADISON, SENATOR HERBERT H. KOHL (D-WI) WITNESSES PANEL I: DOUGLAS ROSS, SPECIAL COUNSEL FOR AGRICULTURE, ANTITRUST DIVISION, DEPARTMENT OF JUSTICE, WASHINGTON, DC; PETER CARSTENSEN, , WI.; PANEL II: WESLEY M. BATISTA, CEO, NORTH AMERICA, JBS SWIFT AND COMPANY, GREELEY, CO; STEVE HUNT, CEO, U.S. PREMIUM BEEF, KANSAS CITY, MO; BILL BULLARD, CEO, RANCHERS-CATTLEMEN ACTION LEGAL FUND, UNITED STOCKGROWERS OF AMERICA, BILLINGS, MT; DILLON M. FEUZ, PH.D., DEPARTMENT OF ECONOMICS, UTAH STATE UNIVERSITY, LOGAN, UT; MICHAEL STUMO, LEGAL COUNSEL, ORGANIZATION FOR COMPETITIVE MARKETS, LINCOLN, NE; DAVID BALTO, SENIOR FELLOW, CENTER FOR AMERICAN PROGRESS “HEARING OF THE SUBCOMMITTEE ON ANTITRUST, COMPETITION POLICY AND CONSUMER RIGHTS OF THE SENATE JUDICIARY COMMITTEE; SUBJECT: CONCENTRATION IN AGRICULTURE AND AN EXAMINATION OF THE JBS SWIFT ACQUISITIONS”, 5-7-2008, govinfo.gov/content/pkg/CHRG-110shrg45064/html/CHRG-110shrg45064.htm, Lexis

MR. ROSS: –- but I would like to begin with a brief statement now.

The Department of Justice is committed to maintaining an active involvement in the agricultural sector and to protecting competition there through aggressive antitrust enforcement as warranted. The department takes very seriously the concerns expressed by agricultural producers about competitive problems. In antitrust analysis and enforcement, the department carefully considers market power issues both on the sell side, which is often seen as monopoly, and on the buy side described as monopsony.

The department hears and takes into account monopsony or buy-side market power as a particular concern in merger enforcement for agricultural producers who often sell their products to large agribusinesses. The department has brought a number of enforcement actions in the agricultural sector in recent years and has undertaken special outreach to the agricultural community. We have, for many years, regularly consulted the Department of Agriculture, to obtain the benefit of their expertise in our agricultural work.

The department's legal authority in this area is the antitrust law. Other agencies have other legal authority and agricultural policy is far bigger than antitrust. In our area of authority, we are constantly on the lookout for possible antitrust violations and will not hesitate to take appropriate enforcement action when warranted.

My statement demonstrates that we have been active in enforcing the antitrust laws in the agricultural sector, having filed several important cases to remedy anticompetitive effects that were likely to resolve from proposed mergers and acquisitions, and to stop collusive anticompetitive practices that adversely affected farmers and competition in this key sector of the economy.

I look forward to your questions about our work. Thank you.

[SEN. KOHL](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): Thank you, Mr. Ross.

Mr. [Carstensen](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0).

MR. [CARSTENSEN](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): Wow, he was able to get through that in only two-and-a-half minutes. No professor is going to be able to top that performance.

I am truly honored to be offered this opportunity to express my views on the state of antitrust enforcement in markets related to agriculture. I have a longer statement which I hope will be included in the record.

[SEN. KOHL](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): We'll do it.

MR. [CARSTENSEN](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): Thank you. In a nutshell, the government agencies charged with enforcing antitrust law have repeatedly failed to challenge or to remedy competitive problems that confront American agriculture. Most conspicuous failures come in merger enforcement, where a series of decisions either not to challenge mergers or settle for weak, even anticompetitive remedies has resulted in increased concentration on both the input and the output side of agriculture.

What we have in for the American farmer has been caught in an economic vice. When they seek to buy various inputs they need, seed, fertilizer, equipment, herbicide, they face an increasingly concentrated market and exploitive strategies by producers. When they attempt to sell their products, especially I think in the dairy, meat, and grain areas, they have only a very limited number of buyers who use their buyer power to drive down the prices paid for these products.

What I'd like to do is to give you the highlights out of a few -- out of several of the lessons that I think, and example that I think highlight this point. I want to start with the concern that Senator Grassley expressed in particular about the pork industry. Doug Ross says on page 5 of his written statement that mergers that increase market power violate Section 7, and so I want to use the pork industry as an example where there has been a failure to do this.

Smithfield bought farmland in about 2002-2003 and has recently been allowed to buy premium standard brand. First lesson: Buyer power already exists. The RTI study of livestock markets done for GIPSA found that there was statistically significant buyer power in hogs in that period 2002 to 2005 that is during the period when the acquisition of farmland occurred.

But what is important is that the PSB merger, the acquisition of PSB necessarily increased buyer power to the detriment of farmers. Yet the Department of Justice raised no objection, ignored the empirical analysis, and in its statement justifying its failure to sue it made inaccurate factual statements.

The second lesson is a very important one, is that buyer power –- and this comes from the RTI study –- buyer power rises from much lower levels of concentration when measured by the HHI index number than one would find on the -- would expect to predict buyer -- seller power on the seller side of markets. That is, the concentration was in the 1,000 to a 1,300 level in this period when the RTI study found the existence of buyer power. It's an important lesson that has been totally ignored by our law enforcers.

As to milk, Mr. Ross' statement describes the theory of the settlement, none without litigation, no -- there is no consent decree, there's no opportunity to comment on this. The theory was when Suiza bought Dean, that there would be a divestiture and no exclusive dealings. Since then DFA, Dairy Farmers of America, has both become associated with both, the successor to the Dean-Suiza facilities, also gotten linked to Hood and has managed to get exclusive dealing contracts. There is -- and I think Senator Kohl referenced this in his comments, there's an ongoing Justice Department investigation of many years standing of a number of these bad business practices. Apparently nobody has informed Mr. Ross of all the problems that came out of this consent decree.

I've got some hostile comments about the Monsanto Delta Pine and Land settlement which again results, it seems to me, in some very unfortunate results. There are several other comments about that. I will not elaborate further on that. We know that the next panel is going to deal a lot more with the beef industry. But I want to emphasize and it's clear in Mr. Bullard's testimony that the Justice Department is known about of number of anticompetitive, apparently collusive or monopolistic practices in that industry for a number of years. They're well-documented and they've done nothing.

So the bottom line here is that we have a passive and inactive antitrust enforcement process that has resulted in increased concentration, harms to producers of agricultural products, and of course harms then to consumers.

What can Congress do, because you unfortunately can't bring the lawsuits, which I'd love to have you do? First I think, hearings like this do deliver a message to Mr. Ross, and I hope you're just going to take it back to the Justice Department. Secondly, I think your staff can do more to ask for confidential briefings on some of these decisions, yourselves attend those briefings so that you are better able to understand why they are not doing the things that they ought to be doing.

You could also get a GAO study of some of these key decisions in terms of what happened afterwards. Because I think if you look at pork, if you look at dairy, you look at some of these other industries you're going to see the actual harms.

Finally, you know, I actually -- Doug's my sparring partner. We've done these kinds of shows across the country. He's a dedicated civil servant, and he comes down here and he tries his best to justify what his masters are doing. The problem is he was brought in to be a more focused person ready to engage the issues of agriculture, to make sure that the Department of Justice actually understood things. And sadly, it is just clear that those who actually make the decisions haven't got the message.

Therefore, I think it is really time to change the institutional and legal framework for evaluating mergers and anticompetitive conduct in agricultural markets. I think the Grassley-Kohl bill, the Agricultural Competition Enhancement Act, S. 1759 is a really necessary step in that direction. I congratulate you Senator Kohl for being a sponsor of that legislation. It's a great contribution.

Farmers need workably competitive markets. They need a kind of antitrust enforcement that will control both the structure of those markets and the conduct that is allowed to occur.

[SEN. KOHL](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): Thank you, Professor [Carstensen](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0).

Mr. Ross, we often hear from farmers and ranchers that they have little bargaining power in comparison to the largest agribusiness conglomerates. Many of them claim that the Justice Department has not fulfilled its responsibility to prevent anticompetitive mergers and practices in the agriculture sector of the economy.

Do you believe that the farmers' concerns about increasing levels of consolidation among agribusiness firms are warranted, and if so why has the Justice Department permitted these consolidations to take place?

MR. ROSS: Senator, we hear the same concerns about market power and we take them very seriously. In fact, they have been important parts of each of the investigations that we have done. And I point, for example, to the Cargill-Continental matter in which the issue of market power was the key one.

We did an analysis and established that in nine regional markets, the buyer power of the merged firm would be anticompetitive. As a result, our relief required that 10 divestitures of port and grain elevators be done in order to preserve competitive alternatives for farmers to sell their grain and soybean.

[SEN. KOHL](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): Well, Professor, what is your view of what you've just heard. Are the farmers and ranchers concerns warranted, and in your opinion has the Justice Department done enough to stop these consolidations especially among food processors?

MR. [CARSTENSEN](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): I think the concerns are very much warranted, and as I referenced, that RTI study in the pork industry which is the most recent confirmation that we have very serious problems of buyer power that are being increased. And if you go back and look at the Justice Department's explanation for why they didn't object to the Smithfield Premium Standard Brand merger, they announced that finished hogs could be hauled 400 miles from North Carolina to Kentucky for processing, and that therefore the farmers of North Carolina were at no risk of being exploited. This is in the face of data that shows that they're at about a 10 percent discount in North Carolina whenever there is a full supply of hogs in the markets, because it's costly to haul your hogs anywhere.

So –- and I think the Continental-Cargill is another example of minimalist enforcement. It was a clearly bad merger. They did the least that they possibly could do. We've not seen a good follow-up on what the consequences of that merger are.

Anecdotally when I talked to grain farmers, what I hear is we went from having two or possibly three buyers to at most two buyers and in many more areas we're seeing only one buyer for our corn, for our soybeans et cetera. This is one of the things that's made ethanol really interesting because those plants do create a different kind of competition right now in corn markets. It doesn't do much for soybeans, doesn't do much for wheat. But it does change the dynamic because there are competitive buyers in the marketplace.

So we really need more focus on this. And again, something I said earlier, the analysis of buyer power is different. Buyers are different from sellers in terms of when they get leverage in the market, what kinds of market shares give you leverage. As a buyer, you are the decider. You're the decision maker with respect to whether or not you buy. That creates power at much lower levels of concentration. We simply have not seen from the Justice Department any recognition of that inherent economic fact.

[SEN. KOHL](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): Professor Carstensen, at this time as you know, millions of consumers all across the United States are suffering from rising food prices in many basic commodities. Do you believe that increasing concentration that we are witnessing in agriculture is a big cause of the higher food prices paid by a consumer? And if that is true, do these higher prices find their way back into the farmers' and ranchers' hands?

MR. CARSTENSEN: The first part is, yes, the concentration has two levels. It has an effect downstream or I should say upstream on the farmers. And it has an effect down stream on the consumers. That is, both ends of this process are subject to exploitation by lower prices to farmers, higher prices to consumers. Best documentation of that comes from Professor Cotterel (ph) in a hearing, I think before this committee a few years involving New England dairy products.

And again, Mr. Bullard's written statement for the committee has a number of -- has a good deal of the documentation that shows that increasing spread between what's being paid at the farm-gate, which is constant or declining, and what's being charged to consumers. So what we are seeing is no, it's not coming back to the farm-gate, it's not coming back to the farmer, but the price to the consumer is going up, it's getting caught in those two levels of concentration.

One of the things I emphasize in my written statement is concentration of retail grocery markets, which is really where you get the leverage over the consumer, and then concentration at the production level.

[SEN. KOHL](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): Thank you.

Mr. Ross, what is your view? Does reduced competition among agribusiness companies inevitably will lead to higher prices and isn't strong antitrust enforcement very important to prevent such loss of competition?

MR. ROSS: Senator, the antitrust laws couldn't be more important to protecting consumer prices and effective competition leads to all kinds of benefits like better quality of products, greater innovation, and the ability of farmers as consumers as well as producers to benefit from a competitive economy.

[SEN. KOHL](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): Thank you.

Senator Hatch.

SEN. HATCH: Well, thank you, Mr. Chairman. And Professor Carstensen, you have written, quote "Strategic behavior by market dominating firms as weakened or eliminated the open market process that in turn give agricultural producers the freedom of flexibility to be the genuinely independent entrepreneurs," Unquote.

Now some think that may be nostalgia for a bygone era. Has not the Department of Justice merely been fulfilling its mandate by only taking actions when it believes that a competitive market happens to be in jeopardy? Or put another way, are you not advocating the department become a regulator ensuring survival of small producers when the department's responsibilities under the law will be to ensure competitive markets, not the competitors themselves.

MR. CARSTENSEN: My father was a historian of agriculture so I -- maybe I've got some residual nostalgic genes.

No, I -- let's be clear about this. Markets are going to change, what's an efficient level of production is going to change. But the benefit of workably competitive markets is those changes are driven by economic fundamentals not by strategic behavior. What I was concerned with in the passage you quoted was the kinds of strategic behavior that adversely affects the functioning of the market and favor some players in the market not based on their inherent efficiencies.

The most recent USDA studies, for example, in pork, show that small pork producers relatively –- hog producers, I guess I should say –- have the same level of efficiency that very large ones do. The problem is going to be market access, finding fair rules. And if we're going to go to a contract world, and I'm not opposed to that necessarily, if contracts are what we do then we need proper rules for the contract market so that again it's fair, open, and efficient. And "efficient" is key here because we do want to have those markets be dynamic to change with the changing technology.

SEN. HATCH: Now, on a related point, you wrote a law review article entitled "Concentration and the Destruction of Competition in Agricultural markets: The Case for Change in Public Policy." And this article was described by the National Agricultural Law Center. It's arguing in favor of using antitrust law to protect independent farmers.

Now, there has been a tremendous amount of consolidation in the livestock markets. However, according to the Congressional Research Service, ranchers and farmers still hold fewer than the 100 cows still -- the ranchers and farmers that hold fewer than 100 cows still control half of the market.

Now, the top 30 feedlots only control 40 percent of the cattle on feed. In fact the USDA believes that there are more than 88,000 lower-capacity feedlots in operation today. Now, my question would be, why should the government interfere in a marketplace where half of the cow-calf businesses appear to be held by smaller farms, and there is more than an ample number of smaller feedlots?

MR. CARSTENSEN: Well, if we were talking about a merger among feedlots, I'd agree with you. I don't see an antitrust issue there. But we're talking about mergers among the buyers from those feedlots that are going to reduce the numbers from five to three and are going to create, I think, and certainly this is consistent with all the other data that we have, going to create substantially more buyer power.

As the next panel is going to focus I think much more on the specifics of the beef industry, the problem is access to the fodder facility. The problem is the terms and conditions under which those feedlots get to sell. We've seen a cyclical long-term decline in the number of feedlots that exist and in the number of cattle that are being put on feed, and what that tells us generally is that we're looking at the kind of situation that looks a lot like there's exploitation of monopsony power or oligopsony power, that is buyer power, on these downstream --I'm sorry -- upstream suppliers.

One of the important points that your data makes fundamentally is that if you're going to be a 100-head feeder or a 10,000-head feeder, looks like you can compete in the market as long as you have access to the meat processors, to the cattle slaughter facilities. What we're focused on here today is a merger at that buying level. That's the place where the problem will exist for all of the different feeders that you're identifying.

SEN. HATCH: Okay. And Mr. Ross, just have some questions to you. During the previous administration Cargill acquired Continental in the already concentrated grain trader market. Specifically, the number of grain traders was reduced from four to three. However, the Department of Justice insisted that the combined Cargill-Continental sell 10 percent of its operations to a competitor. Why then in 2003 did the Department of Justice decline to take action on the Smithfield-purchased Farmland Food's pork processing plants? Was this also not a highly concentrated market? And why the difference in enforcement action, just so we understand better?

MR. CARSTENSEN: Thank you, Senator. We welcome opportunities to be more transparent about the bases on which we decide to enforce or not, where appropriate.

In the Cargill matter, we did extensive analysis of the market including talking to many experts in the area including farmers, and our analysis showed that there would be the kind of any competitive consequences, that is a substantial lessening of competition in a market in nine regional markets and therefore we required relief of the sort that we have described.

By contrast, in the pork matter involving Smithfield farmland, we did a similar kind of analysis and the fact showed a different result. We looked at the procurement areas for each of Farmland's plants and how many packers would buy hogs in the same procurement areas and the slaughter capacity of each of the competing packers.

Our conclusion was that neither Smithfield nor Cargill, which you will recall was one of the potential buyers there, would make as much as 30 percent of the live hog purchases if it had acquired Farmland's assets. And our conclusion was that there would still be at least six competing packers where the acquirer had competing plants. So we thought that was a basis on which not to take action because there was no anticompetitive result.

SEN. HATCH: Thank you, Mr. Chairman. My time is up.

[SEN. KOHL](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): Thank you, Senator Hatch.

I'd like to say that we are going to –- as a result of our concern about these mergers and their impact on higher food prices, we are asking the GAO to make a study to look at whether or not there really is a correlation between these two critical factors.

Professor Carstensen, Senator Grassley, and I have written a bill that would shift the burden of proof so that merging parties and agricultural mergers have to justify that their mergers do not harm competition rather than the other way round which is as it is now. Do you support this idea, and if you do tell us why?

MR. CARSTENSEN: I think it's a very good idea because it really requires not just the vague waving of hands in the Justice Department office saying that there are going to be no harms, but actual proof in a court of law where the defendant merging parties have to come in and genuinely justify the non-anticompetitive implication of the merger.

And especially as the court decisions have accumulated of late, courts have really been putting an extraordinary burden on the Justice Department, the Federal Trade Commission, to establish that any particular merger will tomorrow result in serious harm. The statute actually only calls for evidence that the merger may substantially lessen competition or tend to create a monopoly, so that this restores in many respects the classic statement of what the standard should be, and I think it's a wonderful idea.

[SEN. KOHL](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): Mr. Ross, I assume you agree. (Laughs.)

MR. ROSS: Senator, surprisingly enough, Professor Carstensen has also referred to me as his punching bag and here again we will disagree. (Laughs.) The Antitrust Division is satisfied that the burden of proof in all merger enforcement actions should be the same, whether for agriculture or any other part of the economy that it works effectively and I'm aware of no case in which we wouldn't decline to take a case to court because of the burden of proof.

[SEN. KOHL](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): Thank you.

Senator Feingold?

SEN. RUSSELL D. FEINGOLD (D-WI): Thank you, Mr. Chairman. Before I get to my statement and questions let me specifically welcome Professor Carstensen. I've known him and been friends for many years with him and his wife Carol (ph) who was a distinguished and long- serving school board member in Madison.

MR. CARSTENSEN: Just finished.

SEN. FEINGOLD: I'm aware of that.

MR. CARSTENSEN: After 18 years.

SEN. FEINGOLD: I read the paper that comes to my door there -- (laughs) -- and she did a wonderful job. It's good to see you and I thank you for all -- you and all the other witnesses –- for appearing this afternoon.

Mr. Chairman, thank you for holding the hearing to shed light on an important issue for farmers and consumers.

Before I talk about agriculture specifically, I want to note the overall troubling state of concentration across multiple sectors of the economy.

Over the past few years consolidation and related competition concerns have increased a variety -- in a variety of areas including freight, railroads, food retailers, and radio stations, just to mention a few. Just two weeks ago the same subcommittee chaired by my distinguished colleague from Wisconsin considered proposed mega- mergers among airlines and now we are turning to a merger that would reduce the number of major beef meat packers from five to three. This growing concentration rates is today's question about the Department of Justice's enforcement of existing laws as well as the adequacy of those laws to ensure fair, open, and equitable markets.

Increased consolidation and market concentration are serious problems for agricultural producers throughout the nation. As I travel around our state of Wisconsin, as the chairman knows, these issues are consistently raised by farmers and growers with respect to the proposed [JBS Swift](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0)acquisition that is important to my constituents that the facilities in Wisconsin remain operational and there's no loss of jobs. I also have various concerns, serious concerns, that the combination of the third, fourth and fifth largest beef meat packers will significantly reduce the number of potential cattle buyers, and as a result depress prices.

Wisconsin is not the leader in beef cattle production. The prices for these animals form the basis for the prices paid for cull dairy cows, and could therefore have a significant impact on the bottom line of thousands of Wisconsin's family dairy farmers.

Exacerbating this horizontal concern is the significant vertical integration that the post-merger company would enjoy from the major cattle feeding operation of Five Rivers Ranch Cattle Feeding. Both the prepared testimony of Mr. Stumo and Mr. Bullard highlight how this captive supply will negatively impact competition prices paid to farmers and ranchers.

Earlier this year, I signed a letter with several of my colleagues expressing some of these concerns to the attorney general. Mr. Chairman, I would ask unanimous consent that that be included in the record.

[SEN. KOHL](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): It will be done.

SEN. FEINGOLD: Mr. Chairman, I hope that the Justice Department will get serious of our protecting consumers and agricultural producers from increased consolidation and market concentration.

Mr. Ross, in Professor Carstensen's written testimony he says, quote, "The Antitrust Division has an open investigation of the conduct of the milk industry. But the matter has been pending for years without any action." Unquote. The statement goes on to describe the industry as rife with a panoply of anticompetitive practices that have resulted in serious losses of income and coercion of farmers.

And I have heard similar frustration directly from dairy farmers and others in the dairy industry in Wisconsin. What do you have to say with regard to the status of the investigation, and Professor Carstensen's observation?

MR. ROSS: Senator, we take concerns about the dairy industry as well as any other part of the important agriculture economy very seriously. Without confirming or denying a particular investigation which should be inappropriate, we continue to monitor any anticompetitive practices that are brought to our attention and we do an extensive analysis to determine whether an antitrust enforcement action is appropriate.

As my statement indicates, we have been active in the dairy industry involving the Suiza-Dean merger and other dairy areas. So we continue to have active knowledge and monitoring of the important sector in agriculture that involves a key industry in your state.

SEN. FEINGOLD: I look forward to following on that, Mr. Ross. Also, Professor Carstensen described the controls that DOJ placed on the Dean-Suiza merger as ineffective, specifically as written testimony says -- quote -- "In addition, the press release announcing approval implied that the new firm would not enter into a long-term exclusive dealing contract with dairy farmers of America, the largest cooperative. However, Dean and DFA quickly found a way around that commitment." Unquote. Could you shed some light on that, on the merger commitment? Did the Antitrust Division err in not making the provision broader to include partnerships and joint ventures in that prohibition?

MR. ROSS: Senator, our analysis was a careful and thorough one, and the remedy we devised before allowing that merger to go forward was one that was based on extensive analysis of the market conditions on the ground. If there are concerns about what has happened subsequently, we welcome anybody bringing that to our attention and we will examine it very seriously.

SEN. FEINGOLD: Well, it does sound like a potentially troubling oversight to me.

Professor, do you have anything to add on that?

MR. CARSTENSEN: (Laughs.) The investigation was completed. The staff recommended that there be litigation. It has been sitting, at least according to the information I have, in the assistant attorney general's office for more than a year.

The key regional attorney, I believe, has now reached retirement and retired. And the government -- this alleged complaint –- that was never a complaint in Dean-Suiza; it was what's called a "fix-it- first." They bargained for about nine months about the divestiture. More divestiture was made than originally proposed. It was settled with whatever confidential documents were exchanged between the parties.

Since there was no consent decree, there was no Tunney Act disclosure requirement, no opportunity for anybody to comment on this. And then all kinds of problems began to emerge for the dairy world because the -- of this relationship not only with Dean, new Dean, but also NDH, National Dairy Holdings that was owned in substantial part by DFA and then it gets linked to Hood. So you've got one, two, and three all tied together.

One credit to the Justice Department. They did go after a small dairy acquisition –- and it's in Mr. Ross' statement –- in Kentucky, that DFA attempted to pull off and one of the good things about that particular piece of litigation, because they actually went to trial on that, was that it did bring to light a good deal of the dubious transactions, the discriminatory transactions within the DFA empire. But for the Justice Department to claim that they're monitoring the situation is to say that they're doing nothing.

SEN. FEINGOLD: And in it -- although Mr. Ross indicated willingness to be open to any sort of things that have happened since, it sounds to me like this could have been prevented in the first place by proper drafting. Is that a correct statement?

MR. CARSTENSEN: If they had gone the consent decree route, yes, they could have drafted that. The state attorneys general are involved in these investigations. The Justice Department is the party that hasn't been heard from.

SEN. FEINGOLD: Chairman, may I ask one more question?

[SEN. KOHL](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): Go ahead.

SEN. FEINGOLD: Thank you very much for the additional time. As the Chairman knows and I am grateful for his support, I have worked with Senator Grassley for a number of years on legislation called the Fair Contracts for Growers Act that would make mandatory arbitration clauses and agricultural contracts unenforceable.

Now, the Judiciary Committee passed this bipartisan bill early in this Congress by a wide margin and the farm bill seems poised to at least take a step in the right direction by requiring that growers be given a specific option to opt in or out of any mandatory arbitration clause.

But the government needs to make sure that this provision has some teeth and I'll explain why by asking our witnesses to put themselves in the work boots of a poultry grower.

So first off you've taken out a loan for several hundred thousand dollars to build poultry houses.

There's only one poultry company contracting with growers in your region and they supply you with chicks and feed and determine your payment based on the weight gain and condition of the animals at the end of each approximately seven-week flock-to-flock contract.

Your most recent contract has a new clause that commits you to mandatory binding arbitration, with arbitration of procedures dictated by the company. As required by the new farm bill language you were told you have a choice whether to opt in or opt out of this provision. You've seen some information about large upfront fees required for arbitration and don't think you have enough cash to cover them if a dispute arises. So you want to decline the arbitration clause knowing that you may have a chance to go to the arbitration if a dispute arises and the company still wants to arbitrate after the fact.

Well, what if one of your neighbors opted out earlier in the year and he has since been plummeting down the grower ranking for weight gain or is being threatened with termination as a bad, quote, "bad producer" unquote. Does that make you think twice before opting out?

Seem like law school here?

MR. CARSTENSEN: (Laughs.) Yes, yes and I'm on the wrong side of the table, suddenly.

SEN. FEINGOLD: For once -- (laughs.)

MR. CARSTENSEN: Yeah, yeah. That's -- I mean that must be the –- an enormous problem with an opt-in/opt-out legislation of this sort. It - you know I am -- arbitration, when agreed to by the parties at the time of dispute is fine. It can be actually a very efficient dispute resolution mechanism when it is imposed on parties, and especially when there is unequal bargaining power as in the poultry example that you have and that's a very real world example. Opt in, opt out, do you want to continue to be my poultry raiser, you know, in which case you're going to opt for whatever I want you to opt for, because I'm -- I as the contractor, I'm going to have the power.

So it's such a theoretically interesting step if you imagined equal bargaining power, but in the real-world terms it really doesn't solve the problem.

SEN. FEINGOLD: Mr. Ross, do you want to comment on that?

MR. ROSS: Certainly, Senator, this sounds like a provision in which there may be disagreement among farmers over whether they like it or they don't like it. Some may and some may not. In any event contract provisions really fall outside the purview of antitrust enforcement action except when they are a part of a larger analysis in a merger context.

SEN. FEINGOLD: All right. And thank you for the additional time, Mr. Chairman.

[SEN. KOHL](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): Thank you very much, Senator Feingold. And gentlemen, we appreciate you being here today. You have brought to light many of the important issues that we're discussing and studying and thanks for coming.

(New panel introduced.)

[SEN. KOHL](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): We'll turn now to the second panel.

Our first witness on the second panel will be Wesley Batista. Mr. Batista is the president and the CEO of [JBS Swift](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0)and Company. Prior to becoming CEO of [JBS Swift,](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0)Mr. Batista was the chief operating officer of JBS' beef operations in Brazil and in Argentina.

Our next witness will be Steve Hunt. Mr. Hunt is the CEO and cofounder of U.S. Premium Beef and chairman of the board of National Beef Packing Company. Prior to his involvement with the U.S. Premium Beef, Mr. Hunt worked in various areas of commercial banking including direct agricultural lending and credit training.

Our next witness will be Bill Bullard. Mr. Bullard is the CEO of the Ranchers-Cattlemen Action Legal Fund, United Stockgrowers of America or R-CALF USA. Prior to joining R-CALF USA, Mr. Bullard served as the executive director of the South Dakota Public Utilities Commission. He's also a former cow and a calf rancher.

Our next witness will be Dillon Feuz. Professor Feuz teaches agricultural economics at Utah State University. His primary research interests are livestock marketing as well as farm and ranch marketing -- management.

Next, we'll have Michael Stumo. Mr. Stumo serves as the general counsel for the Organization of Competitive Markets which is a nonprofit research and advocacy organization with a focus on competition issues in agriculture.

And finally, we'll have David Balto. Mr. Balto's a senior fellow at the Center for American Progress where he focuses on competition policy, intellectual property laws as well as health care. He has also worked as an antitrust attorney at the Antitrust Division of the Department of Justice, Federal Trade Commission, as well as in the private sector. We appreciate all of you being here today.

If you will rise and raise your right hand?

(Witnesses sworn in.)

[SEN. KOHL](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): Mr. Batista, we will start with you.

MR. BATISTA: Mr. Chairman and other members of the committee, thank you for the opportunity to introduce [JBS Swift](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0)to the Committee and to discuss our commitment to invest in America's meatpacking industry.

I am the CEO of [JBS Swift](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0)and want to share with you today, JBS' vision. Our goal through this transaction is to invest our skills, energy and expertise and money to grow the U.S. (meat pack?) industry. We want to expand U.S. sales of beef and pork domestically and around the world. In the process, we will keep and create U.S. jobs.

We are operators of beef, pork, and lamb processing plants, not financial investors. My father started our business in 1955 when he slaughtered just one or two animals per day to supply restaurants in the new capital city of Brasilia. We are still a family business. JBS now has global operation that we plan to use as a platform to expand the sales of U.S. beef and pork around the world.

Our history is clear. When we acquired Swift last year, we expanded operations, we added shifts -- additional shifts, we hired more employees, we improved operation, and we bought more cattle. With respect to the Smithfield and National facilities, we will do the same – buy more animals, expand operation, and hire more workers.

That's what we are doing right now. We will continue to compete aggressively for the purchase of cattle and the sales of beef by all available commercial means, and we will increase our demands and sales over time. This will benefit ranchers and feedlots.

We will keep plants open, make them more efficient, and expand sales of U.S. beef. We also look forward to hiring more workers consistent with changes in U.S. immigration law. We view the U.S. labor force as a great resource.

A couple of questions have been raised that we would like to address. The first is our relationship with producers. We will continue to work with producers as we always have. I have had meetings with employees, cattle producers, and community leaders in Kansas, Colorado, Texas, and we feel -- and feel we are being embraced. I will continue to do this.

There is one major region in the nation which contains the vast majority of all the major slaughtering plants for steers and heifers. That region is the beef belt. It includes North Texas, Colorado -- not North Texas I'm sorry, Oklahoma, Iowa, Kansas, Nebraska, and Eastern Colorado. None of the Smithfield plants are in the beef belt. Most of the Smithfield plants handle primarily Holstein steers and cows.

Regarding the crucial beef belt, after this merger, JBS, Cargill, Tyson, and the regional and local plants will continue to compete intensively for the purchase of cattle.

With cattle moving on trucks, there will be many competing plants wanting to buy animals in the beef belt.

In terms of consumer price, beef products are sold throughout the nation by numerous competitors of all size. [JBS Swift](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0)sells primarily, commodity beef and some case-ready beef and pork. In contrast, National Beef sells very successful branded beef products, and we plan to expand those operations. Swift and National will continue to sell into different and competitive national markets. In fact, when selling to large national retailers, there will be intensive competition among national, regional and local players.

I want to end with one final point. The JBS history in the U.S. is before you. Swift was floundering, had reduced its work force shutting down shifts, and sold plants before JBS purchased Swift. Then, after we bought Swift, we expanded operation, added additional shifts and hired more workers. We kept local managers.

We are investing billions of our company's money in the United States with a goal to grow the industry, to hire more U.S. workers, and increase demand for U.S. beef and pork around the world. We are fully cooperating with the Department of Justice review and hope that the review can conclude as swiftly as possible so that we can implement our growth strategy on beef and pork.

We appreciate this opportunity to tell our story before this committee and looking forward to answering your questions.

On a personal note, my family and I greatly enjoy living in America, in our home in Fort Collins. This is a great country.

Mr. Chairman, thank you very much.

[SEN. KOHL](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): Thank you Mr. Batista.

Mr. Hunt.

MR. HUNT: Chairman Kohl, I appreciate this opportunity to come before you today to talk about JBS' proposed transaction to carve National Beef from U.S. Premium Beef.

I'm the CEO of U.S. Premium Beef and the chairman of National Beef, but most importantly, I'm a fifth generation cattle producer. I speak to you today on behalf of U.S. Premium Beef owners and independent producers, which on March 14th overwhelmingly voted to favor proceeding with this transaction. They believe the livelihood of all cattle producers is dependant upon health and growth of the beef industry and that's why we agree with JBS' vision.

U.S. Premium Beef is a one-of-kind producer-owned beef processing company, formed to link producers with consumers through ownership of processing. As a result, we've been able to design a supply of cattle specifically bred and managed to meet consumer preferences, which results in premiums back to the producers and the processing company.

U.S. Premium Beef was formed in 1997. In addition to processing customer cattle throughout the United States, we have processed over six million cattle of U.S. Premium Beef members. In addition to that we have paid out over $117 million in cash premiums to our members since we began. We've also paid an additional $87 million in cash dividends. That was the result of our ownership in processing.

In other words, our producer owners have become beef processors through U.S. Premium Beef. We have been able to realize the financial rewards from the ranch to the consumer's plate. Simply put, through value-based pricing our company gives producers economic incentive to deliver more valuable consumer-preferred beef.

Since our formation, we have been working to diversify our business geographically through expansion, acquisition of other protein businesses, and pursuit of businesses in markets outside the United States. This has been essential in managing risks our owners take in ownership of processing. This is a strategy that our producers pursue on the ranch and other producers and other businesses pursue as well.

Since the discovery of BSE in the United States in 2003 and a subsequent loss of the export market, losses and prospects of the declining herd have left the beef industry in a position where few want to invest. In 2006, Hicks Muse announced that they were selling Swift. Smithfield Foods has also made the decision to exit the beef processing industry.

Whereas prior to 2003, our company was routinely approached by willing investors and partners, today we witness very few, if any, parties willing to invest in the U.S. beef processing industry, except one.

JBS, a family owned business based in Sao Paolo, Brazil –- you've just heard from Wesley Batista –- with U.S. headquarters in Greeley, Colorado, is willing to invest over $3 billion dollars in our U.S. meat processing industry. They believe that by putting our companies together, we can create more value and increase efficiencies not only necessary to sustain our industry, but to begin growing it again.

More importantly, JBS has the same vision for industry growth and success as we do. Since acquiring Swift last year, JBS has expanded production and purchased more cattle. They also have looked for ways to expand demand for U.S. beef by pushing into new international markets. They're able to use their unique perspective to introduce U.S. beef to foreign companies and new customers.

For U.S. Premium Beef, this partnership with JBS is a natural decision that enables our producer owners to broaden our investment into a well-diversified, multi-protein world leader in value-added products while at the same time we're able to maintain our founding principles of value-based pricing and dissemination of valuable carcass data to every single producer on every single animal.

JBS respects what we have accomplished at U.S. Premium Beef/National Beef, and wants to build upon value-added strategy to help bring more value to producers so we can begin expanding production once again. After completion of our proposed transaction with JBS, more producers will have the ability to market through our unique producer-owned company by delivering cattle to more plants, thus reducing freight costs and improving efficiencies for producers and the processing company. Our confidence in JBS' dedication to expanding demand for U.S. beef through this strategy is exemplified -- is a strategy that is exemplified by U.S. Premium Beef's agreement to become a substantial investor in JBS.

The farmer and rancher owners of U.S. Premium Beef have a right and an obligation to pursue sound business strategies employed by our competitors, recommended by universities and applauded by Congress. These include value-added strategies through vertical integration from the bottom up, product diversification to lay off risk and foreign investment to participate in a growing consumer global market.

As you know, the Department of Justice is reviewing the proposed transaction. I am confident its review will be thorough and when complete will lead to and will recognize the benefits of this transaction.

The beef processing industry is highly competitive, with Cargill, Tyson, JBS and a number of other processors remaining to compete fiercely for cattle and to sell beef to our sophisticated customer base. This transaction will enhance this competition by allowing the combined company to perform more efficiently and provide a platform for growth in the future.

Mr. Chairman, thank you for this opportunity, and I look forward to answering questions later.

[SEN. KOHL](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): Thank you Mr. Hunt.

Mr. Bullard.

MR. BULLARD: Mr. Chairman, thank you for this opportunity.

I represent the thousands of men and women who own and operate cattle operations all across this country. As the CEO of R-CALF USA our organization endeavors to ensure that our independent cattle producers can remain profitable long into the future.

I want to describe our industry to you. United States cattle industry is the single largest segment of American agriculture.

It produces $50 billion annually, 11 states produce over a $1 billion a year. This industry is intrinsically important to the overall prosperity of rural America. It's important that the subcommittee realize that while the four major packers do control the steer and heifer market, that steer and heifer market represents only 27 million of the 45 million cattle that are sold every year.

Our U.S. cattle industry is a dynamic industry and in that industry we have various value-added segments. So while we have 45 million cattle sold every year, 27 million are sold into this highly concentrated marketing structure consisting of just four firms. And it is at this segment of the industry that –- which serves as the portal to actually cause harm throughout the industry if there's any price distortion that occurs within that segment.

Our industry can be viewed as a pyramid. At the base of the pyramid you have the seed stock producers, the breeders. The breeders sell breeding animals to the cow-calf producers. The cow-calf producers produce a new calf every year. They'll keep that calf for four to six months. That calf is then sold to a backgrounder. A backgrounder will grow that animal to what might be called its adolescent years. The backgrounder could then sell that animal to a stocker. The stocker would run that animal for about four months. So it takes about 18 months from the time that an animal is birthed until it's actually sold in the steer and heifer market to one of these four (animals?).

Our industry in this pyramid, those segments that I described, the breeder, the cow-calf producer, the stocker, the feeder, we have about 970,000 of them left in the United States. And as you move up this pyramid you get closer to the feeding sector, there's about 93,000 feeders left in the United States. But that industry is becoming increasingly consolidated as well, because there's now fewer than 2,500 feeders that actually sell approximately 23 million cattle to these four meat packers.

So what I've described is an industry, a dynamic industry that is intrinsically important to the prosperity of rural America, that's valuable in every state of the union. But this industry has the price-making segment at the top of the pyramid, and any distortion in that price will reverberate all the way down through the industry.

A 3 percent reduction in price, for example, which is about what they found in terms of detrimental impacts of further concentrations in this industry, a 3 percent impact would reduce that $50 billion annual revenue generations down to $1.5 billion, a loss of $1.5 billion. This would be damaging to the 970,000 independent producers as well as damaging to the rural communities that they support.

This industry has been besieged by market power for quite some time. And we have ample evidence to demonstrate this and I've provided that in my written testimony. For example we've lost 40 percent of our producers just since 1980. We had 1.6 million cattle producers in 1980; we're down to about 975,000 today.

Our size of the U.S. cattle herd has been reducing for many, many, years. We have decreased the size of the herd today to where it was about back in 1950s. And while we have reduced the size of our production capacity by reducing our herd size, we have also been experiencing a disruption of the historical cattle cycle. That cattle cycle has provided a bellweather indicator of the competitiveness of this industry. And recently, USDA acknowledged that the analogous hog industry that is also experiencing a loss in its hog cycle, that loss is attributed to a changing market structure, a market structure that is evident by further consolidation in concentration.

I want to leave you with this: Our industry is in a state of emergency right now. We continue to experience contraction. This merger is going to exacerbate the current contraction of this industry, and like the hog industry as already described –- we had 667,000 producers in the '80s down to 67,000 today; you lost 90 percent of all the producers in that industry –- we're going to see the same thing in the cattle industry unless the Department of Justice and unless the U.S. Senate and the U.S. House take specific action to reverse the pressing course. Because like Congress was unaware of the tremendous exodus of hog producers, we will -- you will be unaware of the exodus of cattle producers, because it will happen one cattle operation at a time, in one rural community at a time until we wake up one morning and see we've lost the critical mass within this industry to maintain a viable market.

Thank you.

[SEN. KOHL](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): Thank you, Mr. Bullard.

Mr. Feuz -- Dr. Feuz.

MR. FEUZ: Thank you Senator Kohl for the opportunity to speak to the committee --

[SEN. KOHL](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): I don't think your mike is on.

MR. FEUZ: Thank you Senator Kohl.

I want to begin my comments by just reiterating the change that has taken place in the packing industry over the last 20 years, when you look at the major players, Tyson who acquired IBP, Smithfield who acquired Moyer Packing, and Packerland; ConAgra who was a major player in 1987, exited the industry in 2002, and most recently Swift who went out with the JBS acquisition of those.

I point that out to -- as a fact that this is not a static industry but one where firms continue to enter and exit the industry. From a pure economic point of view I would have much greater concern about the level of concentration in market power if I did not see firms entering and exiting the industry.

Secondly, I point out that there are likely as not excessive profits being generated in this industry due to the level of concentration, or you would likely see the players that are there remaining in that industry to capture those excessive profits. Certainly, I don't think if IBP were strong enough, they would have allowed Tyson to acquire them. Nor would have ConAgra, a major agribusiness firm that continues to be involved in agriculture, divested themselves of both cattle feeding and beef packing had they been earning excessive profits due to concentration.

As I look specifically at this merger, I see three potential benefits. First of all, as [JBS Swift](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0)has noted, they bring outside capital and new ideas into an industry, that's probably needing both. As you look at the packing industry of the last couple of years, margins have been very small in that industry. And certainly some of the existing players are probably in a financial condition that they would not be able to continue operations without an additional capital. Perhaps even more important is the addition of some new ideas, particularly I think in the export market area where JBS Company has shown a history of being very aggressive in the world export markets. And I think that they can bring that level of expertise to the U.S. and increase our exports, particularly into some markets where we have previously not had access.

Another benefit I think has been highlighted somewhat by Mr. Hunt from U.S. Premium Beef. They have had one of the premier pricing grids for fed cattle, particularly upper-quality fed cattle that has been in the industry, that has allowed independent producers to receive a premium if they were producing a higher-quality animal.

Unfortunately, in the present situation, transportation has restricted the producers that could really benefit from that, because all those cattle had to be slaughtered, basically in Western Nebraska's two national plants. With this merger, that will become much more geographically dispersed into the Northeast, the Western markets as well as throughout Iowa, Nebraska, Kansas, and Texas, as there's greater plants that would have that grid available.

And lastly, I think on the market-power issue alone, perhaps three strong players competing for a limited supply of cattle would be more aggressive in the market place than what I view as currently two strong majors and one weak major within two regional competitors, one of which itself was probably in some financial difficulty. As I talked with the one feedlot operator in Utah, he mentioned to me that perhaps one strong player in the market would be better than a weak or no player.

On a couple of cautionary notes, certainly, the loss of a bidder in a market place is a concern. Going from four major players to three in the primary cattle feeding area will be of concern. However, if the plants stay open you'll still have the same competition for the number of cattle.

Perhaps of greater concern would be in the cow/calf and dairy market in the Southwest where you may be going from two independent firms, Smithfield and National to one in those areas. That could be a concern.

Lastly, I want to close –- I've heard several comments today about a concern for the overall food price level and what this merger may do, and I would suggest that if the Senate is concerned about the price of food, it would be much more advantageous to look at what I view as a ill-advised corn ethanol policy that is doing far more damage than the livestock industry, and will continue for the next few years than what this merger or others would do in that industry.

[SEN. KOHL](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): Thank you, Dr. Feuz. Stumo.

MR. STUMO: Thank you, Senator Kohl. I would ask that my written comments be submitted in the records, please.

[SEN. KOHL](https://advance.lexis.com/document/?pdmfid=1519360&crid=b23b8151-6dd7-4bd9-a94e-c025c1c31293&pddocfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A4SGH-1HG0-TWK7-H0KX-00000-00&pdcontentcomponentid=8104&pdteaserkey=sr0&pditab=allpods&ecomp=wbxnk&earg=sr0&prid=b1a756dc-6c07-4f18-8e9b-67d2a8da90f0): It will be done.

MR. STUMO: The organization for competitive markets is -- has members including feeders, large, medium, and small, across the spectrum. They're not here speaking today because they're afraid.

They're afraid of retaliation in the marketplace, if they say that their fears about the lack of competition when the packer/buyers discipline them every week, and every day in the market.

When my members speak to DOJ, they insist on confidentiality agreements, so nobody will find out, so they won't lose yet another buyer.

They insist on it. They wish competition -- they appreciate the packers, they appreciate Tyson, Cargill, Swift, National and Smithfield, all of them, but they do not appreciate the chokehold on market access that public policy and the packers have combined to create.

That chokehold is choking off the number of open, negotiated market shackle space in these plants that is available for these sellers and feedlots to sell into.

When you exert market power, you want to grab the bottleneck. In the oil market, in the oil merger of BP-Amoco, Cushing, Oklahoma was the bottleneck pipeline where price was set, and that's where you wanted to have your hands wrapped around.

Here you want to have your hands wrapped around rationing shackle space. There is the Great Plains; you'll see the overlap between JBS plants and National Beef plants. People will tell you that feeders in that area all have four buyers there.

They do not. They may have three, two, or the small guys may beg for someone to come look at their cattle. It didn't use to be. Through the consolidation -- people say it makes no difference. They come up with "happy theories" as to why it will be happy for everybody.

We have heard them today. They are untrue. The results are that a declining number of cow operations and declining cowherd -- We have 300 million people in this country today, increased from 200 million in 1967.

They eat a lot of beef. We should produce more beef to feed them. We don't. Oligopsony power is predicted to be inefficient because it depresses prices, it depresses output.

Oligopsony in this industry has met that prediction. As we concentrate, we depress price, we depress output. We hear vague claims of over-capacity, but yet we're going to expand the capacity. Which one is it?

If there's over-capacity, it's because of Oligopsony depressing price and depressing production, and that is bad. We could produce more beef. We could produce more beef to feed the U.S.

This is what public policy has wrought. It is poor performance. DOJ has failed. DOJ gets all wrapped up in competitive conduct. The judges have not treated them well.

Structure matters. This is -- 65-miles-an-hour is the speed we set on the highway. It's clear everybody knows you can drive safe over that, but it's highly likely to create more accidents than going the speed-limit.

Structure is the same. We can argue about whether there's going to be unreasonable practices or something, but it's highly likely we will have bad results like you see on the right, we have had.

It is a poorly performing country when we eat more food -- our ag sector. DOJ has failed in the Smithfield versus Premium Standard merger, because of marginally competitive market they allowed merger to monopoly in the southeast U.S.

Ghastly result. One packer -- they allowed it. Not an objection. Monsanto bought Delta and Pine Land Company. That merger was rejected in 2000, but they took another run at it and by golly, this DOJ let it happen, with an insignificant divestiture of Stonefield (ph).

Thus Monsanto has 50 percent of the cottonseed market in the U.S., 75 percent in some key regions. Prices go way up, they also choked off competing research by other competitors like DuPont, Syngenta, and others to kill the baby in the crib, so there will not be competition in the future, with future innovation.

We like innovation and choice, and we like competition. We don't have it. All the arguments that say we do, are based as you heard, perhaps, may, this could happen, that sort of thing, there's no proof.

That's why your Bill 1759 shifts the burden of proof so they have to actually prove it. They can't just think and utter happy thoughts, so judges accept it and ignore all the proof of anticompetitive harm.

Antitrust is out of balance. We could have a flourishing agriculture in diary, beef and pork. We could have lower seed prices, more choice and innovation in seed corn, cotton, and soy.

We do not because of the failures of the Department of Justice. 1759 is a good start and DOJ needs to stop allowing marginal competitive industries to become more non-competitive.

Thank you.

#### That restores competition by making companies proactively justify their practice

Pat Mooney et al. 17, co-founder and executive director of the ETC group, IPES Food Panel, October 2017, “TOO BIG TO FEED”, http://www.ipes-food.org/\_img/upload/files/Concentration\_FullReport.pdf

Implementation of current legislation poses further problems. In the US, of all 15,000 M&A deals that took place between 2005 and 2014, only about 3% were subject to scrutiny by anti-trust regulators (The Economist, 2016). In the EU, of the 1,300 mergers considered between 2004 and 2012, 83 – or 6.4% of cases – were found to raise concern (European Competition Network, 2012), but only 8 were prohibited as only M&As passing a certain market turnover threshold27 are considered relevant for anti-trust.

However, the tide may now be turning. In 2016, regulators from 26 jurisdictions28 intervened in more merger cases than they had done in previous years (Allen & Overy LLP, 2017). While 7 deals were prohibited and 13 deals abandoned in 2015 in all sectors of the economy, 2016 saw 8 deals prohibited and 23 deals dropped (ibid). Of note, only 2 of the 8 deals were prohibited by EU legislators and none by the US, though both jurisdictions are still considered global leaders in anti-trust.29

The agri-food sector has itself remained largely immune from the new tide of anti-trust activity. In its 2014 review of mergers, the OECD acknowledged that the regulatory trend is to make M&As easier for merging parties, and recognized that current policies tend to play out to the detriment of those most negatively affected by food system concentration (OECD, 2014). The capacity of anti-trust regulators to keep pace with rapidly expanding agri-food M&As remains weak (Schanbacher, 2014). Even though fines have been levied against several companies for abuses of power, regulators (particularly in the EU and US) have come under increasing fire for failing to address the impacts of existing agri-food sector concentration and the new generation of M&As (Leonard, 2014) – including the influence exerted by firms over political processes. The reluctance to file cases in major agricultural industries has itself been alleged to reflect corporate lobbying influence (see Impact 8).

Nonetheless, the growing resolve to tackle anti-competitive practices across the economy may now be permeating food systems. Steps being taken in a variety of different jurisdictions and in a variety of sectors may be starting to create a less conducive environment for M&A activity. In some cases, these measures seek to redefine anti-competitive practices and to reframe the scope of anti-trust rules. Steps to date may not be sufficient to reverse the current direction of travel. However, they point the way to key entry points where action is already occurring and could be taken further:

i) Addressing unfair practices in supply chains. Legislative and judicial bodies around the world are showing more interest in tackling excessive power in food supply chains and its impact on farmers and consumers alike:

• In 2010, an investigation by the South African Competition Commission charged a number of leading milk processors with price fixing for raw and processed milk, and restricting market competition.

• In June 2017, the South African Commission began an investigation into the grocery retail market, on the basis of unfair competition practices within the sector.

• In 2016, the European Commission published a report on unfair business-to-business trading practices in the food supply. The EU Directive on Unfair Commercial Practices adopted in 2005 is also currently undergoing evaluation to assess whether the regulatory framework is meeting its purpose of supporting small and medium sized enterprises and curbing abuses within the food supply chain.

ii) Considering the collective impact of sector-wide consolidation and redefining a competitive market. As M&A activity has escalated, a number of calls have been made for mergers to be considered as a whole, rather than in isolation, to acknowledge the unprecedented power a handful of consolidated firms to collectively shape food system dynamics (ETC, 2017; Friends of the Earth, 2017; TWN, 2017). Actions are being taken and proposals are being made for new ways of defining and measuring anti-competitive practices, often on the basis of considering food systems as a unique sector with high social importance:

• “Creeping concentration”, i.e. a series of minor mergers leading to high levels of market concentration, is coming to the attention of regulators in Australia and elsewhere.

• In Ireland, the Competition Authority considers concentration along the whole supply chain in order to assess market power resulting from vertical integration (OECD, 2014).

• In France, the M&A vetting process has been amended to give more space to the participation and the concerns of competing enterprises not immediately affected by the proposed merger. A related law further stipulates that companies looking to close a site – including following a takeover – must frst set it up for public sale and/or attempt to find a buyer.

• In South Africa, the 2012 review of the Walmart (US) and Massmart (South Africa) merger sparked unprecedented public debate. Though the merger was ultimately approved with conditions, it highlights the possibility of drawing on a more integrated competition review process. During the review, a number of government departments brought forward opinions and conditions on the case, allowing authorities to recognize the impacts of mergers beyond consumer welfare and competition, including employment and displacement of small business suppliers.

iii) Shifting the burden of proof onto companies. Some proposals are now being made for companies to proactively justify their M&A activity:

• In July 2017, the US Democrats presented their new political platform, the “Better Deal”, urging a new precautionary approach to current and future mergers. The vision included setting new standards for a more holistic, long-term view of concentration’s effects on the economy and society, and better monitoring of a company post-merger. While still focused on consumer welfare, in September 2017, Democrats on the US Senate Judiciary Committee’s anti-trust panel stipulated that companies seeking a mega-merger would have to show that the deal would not hurt consumers and demonstrate its benefits, rather than simply relying on the FTC to judge the impact of mergers on consumers (US Democrats, 2017). The Better Deal goes so far as to acknowledge the detrimental impact on farmers and rural communities likely to result from the Dow-Dupont, Monsanto-Bayer and Syngenta-ChemChina mergers, as well as the influential role large corporate actors have in shaping policy. It identifies the food and beverage sectors as two of the five key industries requiring more stringent anti-trust monitoring.

#### Our method is valuable:

#### Mirroring---reflexive deliberation over conflicting views about sustainable futures is necessary to create them

Arjen E.J. Wals et al 17, Wageningen University, Joseph Weakland, The Netherlands/ University of Gothenburg, Sweden, Peter Blaze Corcoran, Florida Gulf Coast University, “Preparing for the Ecocene: Envisioning futures for environmental and sustainability education”, Japanese Journal of Environmental Education, 4-20-2017, <https://doi.org/10.5647/jsoee.26.4_71>

II. Envisioning Futures In The Future shock, Alvin Toffler wrote 40 years ago about the social paralysis that comes with rapid changes where people cannot keep up with the times. Rapid technological and social change leaves people disconnected and in a state of ‘shattering stress and disorientation’ which he referred to as ‘future shocked’ (Toffl er 1970). Today we not only witness accelerating technological change, which is nowadays compounded by hyper-connectivity, social change, hyper-migration, in part as a consequence of climate change, but we also are facing rapid ecological decline. Essentially we are in a state of global systemic dysfunction (Lotz-Sisitka et al. 2016). Lack of place, identity, psychic numbing, and a loss of agency are only a few consequences humans are suffering, not to mention the consequences suffered by the non-human world of plants, animals, and other living beings. A question for educators and those seeking to reclaim some kind of balance, meaning, and belonging in our existential quest on this planet is whether we can slow down, reflect, and re-think. More specifically, can we reclaim the future as it seems to spin out of control?

The future seems like a runaway train. American media-theorist Douglas Ruskoff , in a fascinating interview on Dutch Television, talks about reclaiming the ‘now’ (VPRO Tegenlicht 2014). He argues that we are no longer leading the life we want to have but that our lives are predetermined by the electronic cookies we accept which eventually and subtly influence the choices we are to make out of the overwhelming number of options that billions of people have nowadays. As a result, we do not live in the “now”, but live in the “near future”: as soon as we try to just ‘be’ or try to become connected with a place or with someone or something, we are distracted by our so-called ‘connectivity’ to the world-wide-web of temptations. Our ‘body-glued’ technologies demand us to go somewhere else, to go check something, to get something, to become something. There is little time to be bored, to ponder, to stare, to wonder, to mull things over, to sink deeply into a book, to gaze at the stars, no time to reflect at length on things that really matter and make us human. In order to think about a sustainable future, we need to be able to pause, think, and imagine.

Both environmental and sustainability education are founded on the basic premise that education and learning in one way or another can help create a better future. But not just any type of education. Some of the unhealthy trends in society can be seen in our education and, in fact, reproduce and reinforce them. Looking at the current educational system can help explain why humans have become who we are, and why it might not produce the kind of learning needed to change who we are and what we are becoming. When education amplifies unsustainability by emphasizing individualism, continuous (personal) growth and development, cultivating the idea of being productive citizens and diligent consumers and embracing the idea of competition at the expense of solidarity, then it accelerates systemic global dysfunction.

The notion of ‘envisioning futures for environmental and sustainability education’ raises many possibilities and questions. We can pause and think more about the meaning of ‘envisioning’. Envisioning suggests an active process that leads to some kind of image or vision of what is, what might be or even what was. Envisioning a future can be seen as a reasoned imagining, an educated semi-fictional sketch of what might be. We can engage many people – young and old, rich and poor, living in disaster prone and fragile regions or in more stable ones – in such envisioning and see what kind of commonalities and differences might emerge. Envisioning can become a bridge among binaries, polarization, and separation and open up the spectrum between hope and fear, survival and extinction, climate change resilience and runaway climate change, between coming together and survival of the fittest.

Likely these visions are influenced by who you are, where you are, where you have come from, where you are going. A rich collage of possible futures will emerge that can become the beginning of a conversation about probable, possible, and desirable futures. What does the word ‘desirable’ or, for that matter, ‘sustainable,’ mean to different people who envision such futures? Still other questions might be raised about why some futures are more probable than others or what influences the change toward a more desirable future. If we do agree on an alternative future, then questions about how to get there – sometimes referred to as backcasting (Holmberg and Robert 2000) – also need to be asked. Who needs to do what, when, and how? What forces are working with us, what forces work against us? What is it that needs to be sustained, what might need to be disrupted or unsustained? The latter question is often ignored as the idea of transgression and disruption is often seen as political and aversive. Yet, transgression and disruption might be essential for breaking with powerful and highly resilient but outdated systems and routines that are inherently unsustainable (Lotz-Sisitka et al. 2016). The future is as much about the past as it is about the future. Both in envisioning and in backcasting we can benefit from what was before and how the past is represented in the present – and likely how it will continue to be represented in the future. Sometimes we can find things in the past that were lost in our ‘leap’ to modernity that might provide clues for sustainable future. Sometimes ancient practices and principles still exist in places that have been able, willingly or unwillingly, to escape this leap to modernity. Indigenous and intentional communities across the globe with more relational ontologies, communal values and ethics, and traditions that allow for more spiritual and meaningful ways of being in the world could very well offer guidance in envisioning a sustainable future (Chaves 2016). At the same time, envisioning a sustainable future might also benefit from imagination and (science) fiction, as they can lead us to consider the seemingly impossible, as well as create new energy and innovation. Critical here is that this energy and innovation is paired with some kind of planetary consciousness and underpinned with values and ethics that move Earth closer to the post-Anthropocene which, we propose to call the Ecoscene. The Ecoscene is the geological epoch during which Earth enters a long relatively stable period where life on Earth is in a state of a dynamic equilibrium and homo-sapiens lives by a so-called flat ontology, recognizing that all species are exceptional. Clearly we haven’t arrived there yet, but let us assume that we have still plenty of time to get there or somewhere else that may turn out to be more sustainable.

So, the future then might be considered an emergent property that we never meet but when imagined can give us some direction in where we are going. As a ‘product’ of envisioning, it is marinated in uncertainty and complexity, and, indeed, in ambiguity, even controversy, as there will be disagreement about both knowledge and value claims with respect to what makes for a desirable future. Who is ‘we’ in the ‘Future We Want’ report on ESD (World Commission on Environment and Development 1987)? Who is included and who, or what, is not? Post-human perspectives and new-materialist (Alaimo 2012) perspectives are not represented in such a report (not to mention the human perspectives not represented in the titular ‘we’). Envisioning futures in the context of sustainability needs to be mindful of multiple perspectives.

A focus on the future and imagining what might be is needed in order to break through the tendency to see the continuation of present manifestations of global systemic dysfunction (e.g. climate change, mass extinction, excessive inequality, sexism, bigotry, animal abuse, and the on-going toxification of water, air, soil and bodies) as inevitable. Hope and possibility tend to bring about more change than fear and fatalism which tends to keep things the way they are.

We challenge environmental and sustainability educators everywhere to imagine how nascent scientific, technological, social, and ecological developments might perturb, disrupt, and/or transform the field of environmental education. This includes mobilizing earlier lines of related inquiry within the field, such as the earlier mentioned backcasting (Holmberg 2000), as well as charting points of contact between emerging modes of speculative thought and the field’s own longstanding concern with ecological futurity. Our field can also benefit from thinkers within fields such as design, architecture, and computer science. These disciplines have recently initiated discussions concerning how critical speculation might help practitioners challenge ingrained disciplinary assumptions. For example, speculative design (Dunne and Raby 2013), architecture fiction (Gadanho 2009, Lally 2014), and science fiction prototyping (Johnson 2011) harness science fiction’s capacity to explore possible futures through extrapolating elements of our contemporary moment into imaginary worlds.

The work of creating the future is being done now – and much of it is unsustainable in terms of natural and cultural resources. In fact, the notion of nature and culture as ‘resources,’ can be challenged from a sustainability perspective. Can we imagine sustainable futures, and can we design forms of education and learning that help us realize them? Can we envision futures for the field of environmental and sustainability education capable of helping us achieve the transition to sustainability? Future environmental education needs to lead to meaningful engagement with ecological futures in the Anthropocene; needs to develop resilient, adaptable pedagogies as a hedge against future ecological uncertainties; and needs to spark discussion concerning how futures thinking can generate theoretical and applied innovations within the field.

III. Education for the future What might the future might bring for environmental and sustainability education? Historically, we can distinguish different movements and emphases within education, communication, and participation in relation to people and planet (Table 1). Roughly this movement is from nature conservation education (NCE), to environmental education (EE), to education for sustainable development (ESD) to environmental and sustainability education (ESE). Sometimes there was divergence (e.g. when nature- and ecology-oriented education and social justice and democracy-oriented education were separate, sometime convergence (e.g. when environment and sustainability, along with health, peace, democracy are all seen as intricately linked). It must be said that these different ‘educations’ do not literally succeed one another – often they run parallel – and that there will be differences between geographical contexts. Nonetheless, the pendulum swings, but in some parts of the world (e.g. Australia, New Zealand, Canada, Colombia, Brazil, Northern Europe), we can presently see a trend towards convergence where both sense of place and the strengthening of relationships between people and people and the non-human and more-than-human world, as well as the questioning of deep rooted structures and hegemonic values, engaging multiple actors with sometime conflicting views and the crossing of boundaries between sectors and disciplines, are considered critical. The four strands of ‘planetary’ education in Table 1 might also be present in one way or another in the countries featured in this special issue. We have not investigated this but invite readers to do so.

The recent Global Education Monitor Report (GEM 2016) shows quite clearly how education connects with all the Sustainable Development Goals as distinguished in the UN’s Agenda 2030 (United Nations 2015) It also shows that education can be highly problematic when is merely amplifies those capacities in people and those systems and structures in society that accelerate unsustainability. What is new, here, is that a major report from a United Nations organization, UNESCO, is recognizing this and departs from the standard narrative that all education is good because it will lead economic development and growth, and lift people out of poverty. The shift from Education for All (EFA) and the Millennium Development Goals to education as a mechanism to contribute to the Sustainable Development Goals (SDGs) – which are to be leading in international and national policymaking until 2030 – may offer possibilities for the kind of environmental and sustainability education many of the authors in this special issue are talking about. Although, in the spirit of reflexivity and critical thinking, the SDGs themselves will also need to be continuously scrutinized and debated as they too are highly political in subtle (e.g. SDG-1 focuses on ‘eradicating poverty’ but not on eradicating extreme wealth) and not so subtle (e.g. SDG-8 focuses on realizing ‘decent work and economic growth’ which sustains the idea that continuous growth is the center piece of sustainability) ways. We are envisioning a future of environmental and sustainability education that operates very much in the right hand column of Table 1. Of course, there will be unpredictable events that could yield a rather different future, but for now we see a convergence between environmental and sustainability education where more attention will be paid on the affordances for education that connects people and planet and empowers people to make change and to live meaningful, dignified and responsible lives. A focus on the affordances and conditions for such education and learning will shift the attention away from questions of how people should behave or what they should be learning to questions like: ‘Do the encounters educators create and the learning spaces they design or utilize allow for students and the structures of which they are part to become more sustainable in the first place?’ Does the learning environment ‘invite’ people to reflect on values, controversies and dilemmas, to become critical of ‘false news’ and ‘viral myths’ and propaganda in the ‘post-truth’ era, but also: to take action when deemed necessary? These are the kinds of questions that will need to be asked if we as scholars, educators, and citizens want to support learning based change towards a world that is more sustainable than the one currently in prospect. We as authors do not wish to prescribe possible futures for all and everywhere but rather invite readers to consider their own contexts and realities and mirror them against some of the possibilities outlined here in hopes that such ‘mirroring’ will open up debate and conversations that can ultimately improve the quality and impact of environmental and sustainability education

#### Competition is a complex web of systems that requires a pluralist lens for an accurate assessment.

Clive L. Spash & Adrien O.T. Guisan 21, Chair, Public Policy and Governance, Vienna University of Economics and Business; PhD, Vienna University of Economics and Business, "A Future Social-Ecological Economics," Real World Economics Review, No. 6, 09/07/2021, pg. 203-214.

Economies are the socially structured institutional process involving the interaction of humans with the natural world. Social reproduction is achieved only within the bounds of the given structure and mechanisms of biophysical reality. The form and scale of economic processes depends upon a set of spatially and temporally contextual social institutions. That is economics concerns the form and function of social provisioning process which can take various forms and are far from limited to price-making market or capitalist institutions. Starting from processes of social provisioning, economics becomes the study of plural historical, actual and potential economies with their underlying institutional arrangements and biophysical basis rather than a singular abstract idealised “economy”. This broadens analysis not only to what institutions, norms and values shape the economic process and agents’ behaviours, but also to what are socially desirable and ecologically sustainable systems of social provisioning. Economics is neither value free nor ethically neutral but its stance on both should be made explicit. It must also be realist about how economies are reproduced via social and ecological mechanisms. That means linking to both power relations and ethical and just means of provisioning, but also material and energy throughput that respects others (human and non-human). The aspirations of economists to provide for the well-being of humanity, if taken seriously, mean a revolutionary change in economics is long overdue.

The philosophical basis of the approach is argued to be closest to critical realism. Core aspects of correspondence here are depth ontology raising the profile of both structure and mechanisms as opposed to a sole focus on empirical facts. Structure as a metaphysical reality with multiple causal mechanisms operating in open systems then poses challenges for how economics conducts itself as a science. While following critical realism in its epistemic pluralism there is also a recognised need for structuring interdisciplinary research and uniting diverse fields via common ontological understanding leading to a structured methodological pluralism (not the eclecticism of constructionism and conventionalism). Potential methods for research are selected on the basis of the qualities of an object of study and research question and as such remain open and diverse (quantitative/qualitative, intensive/extensive, see Sayer, 2010). Economic science is then neither deductivist, empiricist nor reducible to a set of idealised methods.

We start this explanation of SEE by taking issue with the hegemonic definition of economics based on choice and offer an alternative based on social provisioning. This clarifies the failure of economics to address different forms of economies both in theory and as actualised and operational both historically and at present. The relationship of economies to needs and their satisfaction with an associated material and energy throughput then becomes part of economic analysis. As noted, a clarified relationship between the ecological economic and the social is required and we explain some basic aspects of the relationship to social reality. This coverage is an outline of the ontological commitments of SEE, that is how reality is understood, its key constituents as far as an social-ecological economic system is concerned and some of their relationships. Next we outline the way in which economics can be conducted from the perspective of two other aspects of philosophy of science, namely epistemology and methodology.

II. Economics as the study of social provisioning

A rather obvious approach to defining what constitutes economics as a subject is to determine its primary object of study. Economics as an orthodoxy has for some time been dominated by a neo-Austrian dogma that was introduced significantly via Lionel Robbins (1932) and adopted into the mainstream, not least in microeconomic theory. This placed the concepts of resource scarcity and individual choice at the centre of a liberal political economy that was supposedly value free. The economic problem became meeting unlimited and competing wants and the supposed solution was meant to be resource allocation via “the market”, soon supplemented by (macro-)economic growth. In fact a single institutional process associated with capitalism was being advocated, namely, what Karl Polanyi (1957) termed, the price-making market. Robbins neo-Austrian definition then merged into Chicago school neoliberalism, where choice in a market setting, subject to price incentives, became the essence of economics and this has since permeated its meaning. This approach permitted an imperialistic expansion of economics into all sorts of subject areas, simply based on the idea that humans must make decisions as individuals so that any decision became an economic topic, e.g. equating everything from buying a cup of coffee to suicide (as infamously proposed by Becker, 1976).

In stark contrast, an older tradition regards the core of economics as determining the social and institutional arrangements for providing the needs of a community (or nation). Here the aim is to achieve a common good or well-being of all. What constitutes the good/well-being for a group then requires explicit ethical judgment. Modern times reduced the goal of seeking the “common weal” (i.e., the ability to fare well, prosper and have good fortune) into accumulating wealth and making money. Economics then simply became the study of capital accumulation using money and market prices and ultimately leading to economists’ claims of being able to determine optimally efficient public policy.

SEE immediately takes issue with reducing the subject down to studying something as singular as the economy, as if there were only one such entity or form. The term “the economy” is merely unthinking code for market capitalism, while denying actualised varieties of capitalism and that this is only one form of economic system (Hodgson, 2016). So rather than reduce economics to the study of one generic form meant to approximate the currently dominant system, a far broader approach is required, and not least so because this system is failing and creating catastrophic social and ecological crises.

A more comprehensive approach is to define economics as the study of social provisioning to meet human needs within an ethical framework of care and justice for others, both human and non-human. Social provisioning is a necessary activity for any social group whether a household, village, town, city, region, nation state or global collective. It concerns the ways in which people organise as social groupings to satisfy their needs. Markets as mechanisms for allocation are merely one form of arrangement and themselves diverse in structure.

Economics can then be seen as concerned with the variety of institutions for ensuring the satisfaction of needs and the reproduction of a society. Institutions here are to be understood as inclusive of conventions, norms, rules and regulations (Vatn, 2005). This immediately opens up economics for the consideration of alternatives and potentialities rather than the nihilistic claim that there are no alternatives.

A common objection to a focus on needs is that this is deterministic and fails to allow for the variety that appears evident in human society. Such a claim can be seen as confusing objective requirements with subjective means of their fulfilment. Thus Max-Neef (2009 [1992]) makes the distinction between needs and the satisfiers that enable their actualisation. He identifies nine fundamental needs – subsistence, affection, understanding, participation, leisure, creation, identity, freedom – that are regarded as universal and only changeable over extremely long time periods of species evolution (Max-Neef, 2009[1992]: 138). Meeting needs is regarded as a necessary prerequisite for human flourishing, while their means of fulfilment is socially contextual and varies across space and time (Rauschmayer and Omann, 2017). Satisfiers relate to the institutions, norms and practices that structure the satisfaction of needs, and will influence how economic goods and services contribute to their fulfilment or inhibition (Max-Neef, 1992). As such, while needs remain objective, how they are expressed, perceived, and fulfilled will always be subjective, conditioned by institutional arrangements and wider social and cultural contexts. This embeddedness and emergence of an economy from and with social structure forms one of the foundational ontological commitments of SEE.

In turn, social and economic systems are understood as being embedded in, and fundamentally constrained by, biophysical structures (Spash, 2017; Spash and Smith, 2019). All economic processes interact with their environment. There is a straight forward and basic dependency of economic systems upon flows of materials and energy as well as sinks for the necessary removal of waste material and energy. Economies are open social-ecological systems. Their processes operate within a set of limits prescribed by ecosystems structure and functioning, and social structure represented by actors and their institutional context.

III. The biophysical in economics

A basic fact, although absent from most economic thinking, is that natural resources and waste sinks are required to ensure social provisioning. The reproduction of societies must address the maintenance of ecosystems structure and their functioning or fail. Production fundamentally requires energy, or, more precisely, available energy termed “exergy”. That is, humans require energy capable of performing useful “work”, which is defined, as in physics, to mean the exertion of a force against some form of resistance (Ayres and Warr, 2009). Such work can be performed by humans, animals or machines, but will always require some input of exergy, whether it is the solar radiation embodied in food that fuels human and animal labour, or fossil fuels to power a heat engine. This dependency of societies on flows of energy and materials is captured in the concept of “social metabolism” (Krausmann, 2017). There is no single social metabolism because it will vary depending upon the structure of an economy and its social provisioning mechanisms, and there-in lies the potential of alternative socialecological economies.

The metabolic nature of human societies emphasises the role of materials and energy in their reproduction. This make the laws of thermodynamics central to any economic process as explored by Georgescu-Roegen (1971). The first law of thermodynamics stipulates that The metabolic nature of human societies emphasises the role of materials and energy in their reproduction. This make the laws of thermodynamics central to any economic process as explored by Georgescu-Roegen (1971). The first law of thermodynamics stipulates that

Human, and non-human, survival depends upon material and energy exchange which means on being open systems. Giampietro (2019) notes how Schrödinger described living organisms and ecosystems as having the capacity to seemingly avoid, or even reverse, entropic decay through interaction with their surroundings but this requires gathering available energy and concentrated materials from, and disposing of waste into, other systems. Entropy is not actually reversed because it continues in the larger system with which living organisms interact and are dependent. As biophysical entities living organisms are open systems. In general, open systems can maintain organisation, a given size and level of activity, but this has consequences for the systems with which they must interact. The growth of any organism, ecosystem or population is therefore fundamentally limited by the biophysical structure of its environment. These are termed horizontal limits by Devictor (2017: 120-121), because they relate to the spatial-temporal boundary for a given population, assemblage or ecosystem. The same principle applies to human societies and their economies, which depend upon ecosystems for flows of materials and energy as well as sinks for the waste they generate. Giampietro (2019) remarks that this implies that the processes ensuring the reproduction of elements of a “technosphere” (i.e. a social economy) must not interfere with the reproduction of elements in its associated “biosphere” (i.e. ecosystems structure and function) upon which they depend for maintaining a given scale of activity and organisation. Different societies have attempted to address this requirement in different ways with varying degrees of success in sustaining themselves.

Human history consists of a long period in which social provisioning was organised by free roaming, migratory, hunter gatherers prior to the rise of sedentary agricultural settlements. The former appear highly sustainable, long lived and relatively low impact, although some extinction of species is implicated. The latter consisted of small bioregional economies, with regional material flows and solar radiation as the main source of exergy, reliant on agriculture and forestry for various reproductive processes. The industrial revolution marked the start of a major transformation of social metabolism in human social and economic systems. The use of fossil fuels – coal then gas then oil – became the main source of exergy driving production processes, while increasing use of concentrated minerals replaced solar dependent plant and animal materials. This expansion of production, along with the development of artificial fertilizers, facilitated the growth of economic activities and populations beyond their previous limits (Spash, 2017).

This social metabolism appears highly unsustainable. After a few hundred years operating in just parts of the global provisioning system the results appear headed towards catastrophic collapse. The move away from exergy derived from solar radiation to finite stocks of concentrated minerals, combined with economic growth, has meant the social metabolism of industrialised human societies rapidly depleted the “entropic dowry” upon which it depends (Georgescu-Roegen, 1971). As a physically closed system, the Earth exchanges flows of energy but not of materials with its surrounding (at least not in any significant sense), while the reproduction of biospheric entities is made possible by the existence of various climatic systems that dispose of thermal energy into outer space, maintaining favourable conditions for life (Mayumi, 2017). Once used the stocks of low entropy are in effect irreversibly lost. In theory, the flows of exergy from solar radiation could be harnessed to reverse the dispersal of available energy on Earth, but to date this remains science fiction, while the ability to reconcentrate all dissipated materials to original quality on a substantive scale appears equally implausible (Spash and Smith, 2019). Recognising the biophysical reality of the economic process then leads to the inevitable conclusion that industrial economies are dependent on finite stocks exergy and their continued operation, let alone continual growth, is impossible over any extended period of time.

While the exhaustion of finite resources remains an ultimate limit on human activity, an arguably more pressing limit is the accumulation of waste. Industrial social metabolism “merely transforms low entropy into waste” (Georgescu-Roegen, 1971). As such, pollution should not be treated as a problem outside the system (i.e. an externality), or an anomaly, that could somehow be solved through increased efficiency, or correcting prices, but as an integral part of the economic process (Spash, 2021b). The Laws of Conservation indicate the inevitability of pollution because mass remains the same, but the quality of materials, like energy, declines. Ecological economists such as Daly (1992) have emphasised the scale of impacts from human activity (e.g. waste accumulation). What has been given less attention is the qualitative aspect arising due to the creation of artificial substances and interventions that would not have otherwise occurred and to which natural systems and entities are unable to adjust. Such unnatural impacts on the biosphere and ecosystems lie at the heart of the ecological crisis, such as the on-going mass extinction of species. Thus, not just the scale of human activity (e.g. quantity of waste, population size) but also its qualities determine the consequences for the environment and functioning of ecosystems. The importance of the form of intervention is why technology is never neutral, and also what determines the extent to which something is unnatural (Deckers, 2021). Humans are then engaged in processes of change not equilibrium and stability.

The development of ecology in the 1970s brought new insights into the structure of complex systems and their interconnections. This was mainly driven by the realisation of the disruptive impact of human activities on ecosystems’ structure and function, which in turn affected human systems (Spash and Smith, 2019). Contrary to previous views of ecosystems as isolated, self-regulating and stable systems, they became recognised as complex and dynamic open systems. The potentiality to change ecosystem structure dramatically following systems collapse was highlighted by Holling (2009[1986]), who described this organisation and reorganisation process as part of a cyclical pattern. The evolution of an ecosystem or population can be chaotic with abrupt changes in trajectory. Besides the “horizontal limits”, mentioned earlier, “vertical limits” are emergent and arise due to interactions between ecological levels and dependencies between different components of the system (Devictor 2017). Human activities interacting with ecosystems have uncertain and indeterminate consequences for their structure and function. In the face of such partial ignorance and indeterminacy over human intervention, public policy would better be precautionary than risk taking (Stirling, 2017), and society prepared to adapt rather than lock itself in to a specific “optimal” pathway (e.g. infrastructure, technologies, energy and materials).

IV. The social dimension of economics

Social reality is the dynamic outcome of human practices from which it emerges and by which it is reproduced (Lawson, 2006). However, emergence means that social structure while dependent upon is not reducible to human practices (e.g. individual behaviour). Social structure enables coordinated interactions through collective practices. Collective practices refer to accepted ways of doing things in a community, and can emerge in various ways, notably because of their functionality, but also simply by chance or repeated occurrences (Lawson 2012). They form a basis for individuals to form expectations as to the appropriate course of actions to follow in order to coordinate with others. Interconnected obligations and rights may evolve that are relationally constituted and constitutive of social positions (Lawson 2006). For example, the positions of employer and employee exist in relation to each other and entail associated rights and obligations for both parties.

How, and to what degree the actions of agents are pre-determined by social structure, as opposed to being autonomous, is a fundamental point of debate. Mainstream economics reduces “society” to being an aggregation of individuals who act purely out of individual selfinterest (i.e. maximising their own personal utility) and are basically identical (both ethically and psychologically). As such it cannot explain the historical variety in social provisioning systems – production and consumption patterns – throughout history and across contemporary cultures. This requires understanding human variety and social relations as emergent and mediated through institutions and values that interact with, shape and form economic structures. Human action is always relative to a particular context in space and time and set within social structure. While agency is restricted it is neither denied nor entirely pre-determined.

Following Jessop’s (2001, 2005, 2007) “strategic-relational” approach, structure and agency can be viewed as dialectical concepts beyond an artificial dualism. He considers structures as strategically selective, but not absolutely constraining, leaving some room for agency. His main argument is that structures generally tend to favour some actions over others. In this sense, he emphasize the importance of a strategic context for action: agents will strategically reflect on their (usually incomplete) understanding of structural constraints and opportunities and act accordingly. Action is therefore both structured, and “structuring” as it tends to reproduce structures and their patterns of strategic selectivity. These recursive interactions between agency and structure create tendencies because structures are not absolutely constraining. There is then only relative and temporary stability to patterns of strategic selectivity, with the possibility for actions to circumvent structural constraints or change them.

As structures are the product of human agency, they are dynamic and are open to change (Lawson, 2012). Through their practices and interactions, humans continuously (and often unintentionally) reproduce and transform the social structures that influence these practices. The employer-employee relation for example has evolved, with a changing set of rights and obligations as unions have negotiated better working conditions. Likewise, the social positioning of women has changed as emancipatory movements have fought for equal rights as citizens.

That major social structures can change (if generally only slowly) is evident from the contrast between modern society and archaic societies. For example, Sahlins (1972) described how hunter-gatherer economies were characterised by a high degree of underproduction and disdain towards accumulating material possessions. Modern industrialised societies promote over production and waste in a throwaway, fashion conscious mode of conspicuous consumption. Thus, modern consumer behaviour is not an ahistorical trait of human nature, but a specific form of social structure which helps reproduce the capitalist mode of production. The change in economic and social structure during the rise of capitalism and associated market economies has sometimes been described as a change in terms of the extent to which “the economy” is embedded in society. A prime example is the work of Karl Polanyi (1957) which argues that such modern market economies should be understood using a “formal” economic approach (i.e. individual choice in price-making markets). He regards most of human history as having been spent in “primitive” economies, where market exchange was largely or totally absent, and distribution occurred via reciprocity and kinship groups (Polanyi, 1957). Economic (provisioning) activities were described as being embedded in social relations and institutions. Understanding such economies required a “substantive” approach to economics in contrast to the formal approach, which he accepted as valid only for modern economies. The latter are governed by rational logic, efficiency, self-interest and prices which he believes means they can be regarded as disembedded from social relations (Gemici 2008; Polanyi, 1957).

While Polanyi highlights aspects of institutional differences between capitalist market economies and past economies, the division he draws between socially embedded primitive economies and socially disembedded modern economies is erroneous and only serves to reify the utopia of the “self-regulating market” that he painfully attempted to deconstruct (Spash, 2019; Gemici, 2015). The notion of (dis-)embeddedness fails to capture the changing qualities of social provisioning, and ultimately denies their social aspects. This encourages the separation of the social and economic, rather than their conceptual distinction and actual connection. Modern market economies are instituted differently than their historical counterparts, but market relations remain embedded-in, and built upon networks of social relations (Granovetter, 1985).

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Price-making markets have little, or in fact nothing, in common with perfectly competitive markets, where each firm has no power to set prices or control other factors of production. Actual market economies evidence oligopoly and monopoly power institutionalised in the corporation. Prices are the result of power relations and that includes the power to structure markets and regulations in ones own favour. Multi-national corporations and the Davos elite do not wait to be regulated; they lobby and influence government action in their favour opting for self-regulation when other choices are unavailable.

Power in the market place also means creating demand for products. Large firms have means to manipulate social attitudes, and therefore to manage what consumers buy and at what price (Galbraith, 1979; Kapp, 1978 [1963]; Spash and Dobernig, 2017). Promotion of dissatisfaction is the essence of modern marketing via normalising comparison with others, status-seeking (i.e. keeping up with the Jones’s), fashions, in-group/out-group identity, shopping as therapeutic and possessing the latest technology. Rather than industrial production leading to material satiation, and the need for less work, the consumer society has evolved with more work and more disposable products. This process has long been recognised as involving conspicuous consumption (Veblen 1991 [1899]) and manipulation by corporate and business enterprises (Galbraith 1969 [1958], 2007 [1967]; Kapp 1963).

V. Philosophy of economic science

Mainstream economics has attempted to employ and maintain discredited philosophical approaches to conducting itself as a science. On the one hand it aspires to finding objective truths through empiricism as if theory was unnecessary and data could speak for themselves. On the other it promotes a form of deductivism that places abstract mathematical models at its core with unquestionable foundational axioms divorced from any reality. Sometimes the two are combined in a pseudo logical empiricist approach,1 or claims to some vague form of positivism with epistemological positions such as a fact-value dichotomy, a naïve objectivism and the search for universal laws (Spash, 2012). None of this has been neutral, but has rather hidden an implicit conceptualisation of reality. Thus, the particular worldview of mainstream economics has tended to favour regarding economies as physically isolated, mechanical, self-regulating, equilibrating and predictable systems. Leaving an ontology to be defined by a methodology (whether deductivist or empiricist) means falling foul of the epistemic fallacy. That is, objects and their relationships only become accepted as valid, or even recognisable as relevant, if they conform to the methodology, e.g. if something cannot be measured it is ignored, effectively not existing in the analytical approach. Thus mainstream economics is blinkered by its methodological choices and methods (e.g. cost-benefit analysis) come to dictate understanding of reality (e.g. Nature must have a monetary price to be of value). In addition, contrary to the approaches of mainstream economists, the second half of the 20th Century saw a general recognition that science operates in a social context, and that our knowledge is fallible. However, the failings of mainstream philosophy of science are not the primary concern here (see Tacconi, 1998; Lawson, 2006; Spash, 2012, 2020), but rather we aim to suggest what would be a way forward in relation to SEE.

The search for philosophical foundations led Tacconi (1998) to propose a combination of post-normal science and constructionism. However, in its strong form constructionism denies realism and is incompatible with the ontological commitments of ecological economists to a biophysical reality independent of the human mind. Post-normal science is also not a philosophy of science, but an epistemological critique of traditional naïve objectivism in the natural sciences and its transference into the social sciences. As Tacconi (1998) seems to recognise his mixture of inconsistent approaches results in contradictions. Puller and Smith (2017: 19) summarise the problem as follows:

“Ecological economists seem to be searching for a way to combine a perception of the world as independent of our knowledge, while at the same time admitting the social construction of knowledge and the role of meaning-making in the social realm”

They then detail how a philosophical well-grounded approach can be found in critical realism, which combines ontological realism with epistemic relativism.

The form of critical realism of relevance here is associated with the early works of Roy Bhaskar (1975 [2008], 1979). As explored by Lawson (1997) in relation to economics, a strong emphasis is placed on the importance of addressing ontological issues. More specifically critical realism propose a depth ontology that goes beyond empiricist and actualist philosophies to give place to structure and the causal powers of their mechanisms. Structures and mechanisms make events happen. What is actualised is merely part of the potential and the result of which mechanisms and counter mechanisms are operative and which ones dominate. The empirically observable is then merely a subset of what is actualised based on human ability to take events into account.

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While social structures are human constructs they are no less real for that. Capitalism is, for example, a recognisable system with real mechanisms and effects (as described earlier). Reality is further conceived as stratified, with hierarchically ordered strata, starting from a physical dimension, followed by chemical, biological, social and economic dimensions (Collier 1994b). All biological entities are physical, but physical structure is independent of biological structure. Similarly, the co-dependent social and economic strata are dependent upon the biological, the chemical and physical, but not vice versa. However, as consistent with the earlier discussion, higher strata are irreducible to lower from which they are emergent. Similarly, Georgescu-Roegen (2009[1979]) exemplifies such properties by considering how an elephant is composed of physical and biological structure but its behaviour (an emergent property) cannot be explained purely form physics or chemistry. As we have noted society is not simply the aggregation of the individuals of which it is composed.

This stratified and layered understanding of reality also results in a concept of causality that differs from traditional realist approaches. Instead of being explicable as event regularity, critical realism explains actualised events using the concept of causal powers of mechanisms based on structures and mechanisms (Collier 1994a). In open systems, there are multiple mechanisms at play that can either enable or prevent the actualisation of potentialities. Rather than seeking universal and timeless “laws” of Nature there are law like conditions where certain tendencies of mechanisms become actualized (Puller and Smith, 2017).

Bhaskar describes the scientific process as “the social production of knowledge by means of knowledge” (Collier, 1994a: 54). In this view, “transitive” knowledge or thought objects, provide the concepts, models and theories that are simultaneously the raw material and the product of science, and which seek to explain “intransitive” reality or real objects (Sayer, 2010). Science seeks descriptive and explanatory knowledge if natural and social entities, phenomena, events and their relationships. While social structure is subject to change it is not so easily or quickly, it has durability (Lawson, 2006), and that means the same transitive / intransitive approach to understanding knowledge can be applied. Those who emphasise change as undermining all knowledge (e.g. Goddard, Kallis and Norgaard, 2019) fail to allow for durable structure and mechanisms which are the essence of the ability to know anything. There is also a tendency to over play the role of social scientists in affecting their objects of study.

As Sayer (2010: 33) states “social scientists and historians produce interpretations of objects, but do not generally produce the objects themselves”. He argues that a clear distinction is required between an object of inquiry and our knowledge of it, which consists in the language, concepts or images that we use to describe reality. Thought objects are therefore referents to their “real” counterparts, but he regards knowledge of true correspondence as impossible, i.e. all knowledge is fallible.

Experience of the external world consists of ideas (percepts, sense data, qualia) involving socially contextual conceptualisation (e.g. language, culture, prior knowledge). The extension of knowledge involves reconceptualization and involves the role of metaphors and analogies which relate to existing ways of thinking e.g. the current prevalence of computing metaphors and analogies. The transitive or thought object in critical realism involves weak constructionism and is termed epistemic relativity or (sometimes) epistemological relativism. This weak constructionism contrast with the radical relativism of strong constructionism where knowledge is simply a matter of shared conventions among researchers. In such accounts the relation to real structures, mechanisms and objects is regarded as irrelevant or even the existence of a reality beyond the human mind is denied.

Although knowledge is fallible, it is not equally so. Choices can be and are made between difference explanations and descriptions. Representations of the world are of practical use and their employment in our actions and practices has consequences which can be evaluated, help us navigate it and enable us to have an impact on it. We judge what works well and what does not. In Sayer’s (2010: 48) terms intersubjectively shared conventions must prove themselves to be practically adequate, so that our expectations about the world and results of our actions are actually realised. This is more than just the usefulness of a theory, because the adequacy of knowledge is also judge in terms of descriptive realism relative to the structure of reality. Thus critical realism is distinct from instrumentalism (such as found in American Pragmatism) because the aim is not simply prediction but causal explanation. Prediction can be equated with explanation only if one assumes event regularity, which fails to hold in open systems like economies. Indeed, prediction is unnecessary for the explanation of a phenomenon (Collier, 1994a).

Investigation of open systems requires a distinct approach from the idealised laboratory experiment which tries to create a partially isolated system through controlling mechanisms. The limited applicability of such methods for social phenomenon means alternative methods are typically required, such as the use of counterfactuals. However, as Danemark et al. (2002b) point out, there is no specific “method of critical realism”. Indeed the method for investigation is relative to the object of study and research question. Critical realism also recognises a wider range of modes of inference than the traditional induction and deduction. It includes the roles of retroduction and abduction (see Danermark et al., 2002a), as forming part of the process of providing causal explanation, which opens up the methodological toolbox of social sciences and changes understanding of methodology as supposedly (but not actually) conducted in traditional sciences. An inference always implies a form of generalisation and can either refer to extrapolation in an empiricist sense or to conceptualisation of the “hidden essence of things” in a realist sense. Danemark et al. (2002a: 100) suggest five strategies that can help us discern the hidden underlying structures and mechanisms: (1) counterfactual thinking; (2) social experiments; (3) studies of pathological cases; (4) studies of extreme cases and (5) comparative studies.

There are also grounds for judging which methods are appropriate. Methods and related theories must be adequate to their objects of study (Puller and Smith, 2017; Spash, 2012). For example, evolutionary theory, and its associated tools for analysis, is inadequate for understanding the operation of a mechanical clock. Thus, Hodgson’s (2008) argument that evolutionary theory should replace mechanistic theory in economics is flawed because it simply repeats the same mistaken belief that all objects of relevance to economic must be of one form (i.e. evolutionary rather than mechanical). Similarly the imposition of mathematical formalism as defining economics fails not because the methods is inherently wrong but because it cannot address the object of study, i.e. the characteristics of economic systems. More specifically quantifying everything with arithmomorphic concepts excludes all qualitative aspects (Georgescu-Roegen, 2009[1979]). This indicates the need for a structured methodological pluralism, where theories and methods are informed by the qualities of the object under study and cooperation occurs between those with common understanding (Spash, 2012).

A final aspect of note is the emancipatory role of social science research. Investigating the real (structural) cause(s) of a social phenomenon means the explanation of the social scientist will inevitably clash with the existing ideas of some people, that is new evidence may appear, theories brought into question, previously confirmed positions be undermined. Such is the nature of scientific research. Social scientists criticise those holding fallacious ideas. If there are institutions holding those false ideas then the research is also a criticism of them and the social scientists has a role in removing wrong beliefs. Collier (1994a) argues the role of the social scientist is not just to criticize but should be to undermine institutions promoting false ideas. Emancipation is then seen as transforming structure. When considering environmental research the case being made here is clear because research showing beliefs about the benefits of economic growth, fossil fuels, chemicals, plastic, asbestos, genetic modification and so on, to be false then criticise the institutions promoting such things. Research is neither neutral nor value free and facts have ethical implications for both the researcher and society.

VI. Conclusion

The multiple social, ecological and economic crises of our age, and the failings of mainstream economics to explain or address the structural causes of these crises, means new approaches to economics are essential. SEE has been outlined here as a necessary and emerging paradigm. Economics has become increasingly detached from its object of study and the orthodoxy is fundamentally flawed as a social science because it advocates a prescriptive methodology while lacking any serious engagement with epistemology and ontology. The resulting epistemic fallacy means it promotes a narrow implicit world view as if a factual truth. Failures here include imposition of limited quantitative methods and mathematically formalist methodology that exclude qualitative aspects of reality and the use of isolated/closed systems thinking for an open system reality.

Economies are the socially structured institutional process involving the interaction of humans with the natural world. Social reproduction is achieved only within the bounds of the given structure and mechanisms of biophysical reality. The form and scale of economic processes depends upon a set of spatially and temporally contextual social institutions. That is economics concerns the form and function of social provisioning process which can take various forms and are far from limited to price-making market or capitalist institutions. Starting from processes of social provisioning, economics becomes the study of plural historical, actual and potential economies with their underlying institutional arrangements and biophysical basis rather than a singular abstract idealised “economy”. This broadens analysis not only to what institutions, norms and values shape the economic process and agents’ behaviours, but also to what are socially desirable and ecologically sustainable systems of social provisioning. Economics is neither value free nor ethically neutral but its stance on both should be made explicit. It must also be realist about how economies are reproduced via social and ecological mechanisms. That means linking to both power relations and ethical and just means of provisioning, but also material and energy throughput that respects others (human and non-human). The aspirations of economists to provide for the well-being of humanity, if taken seriously, mean a revolutionary change in economics is long overdue.

# 2AC

## Case

#### Good faith implementation is key to AFF ground.

Crane 21—(Professor of Law, University of Michigan). Daniel A. Crane. 2021. “Antitrust Antitextualism”. 96 Notre Dame Law Rev. 1205. <https://scholarship.law.nd.edu/ndlr/vol96/iss3/7>. Accessed 9/12/21.

CONCLUSION

It turns out that the pervasive rhetoric that the antitrust laws are a delegation of common-law powers to the courts is a bit of a fig leaf covering the courts’ declination to enforce the antitrust statutes as written. But something more than judicial insubordination to the will of Congress is happening. The pattern of engagement between the courts and Congress over American antitrust law’s 130-year history suggests an implicit division of responsibility for the management of competing political impulses for industrial smallness and bigness. Congress expresses an idealistic preference for smallness, the courts balance that impulse against pragmatic recognition that larger scale can bring material benefits, and both institutions implicitly accept the other’s role.

That it has been this way since the beginning does not mean that it must continue to be this way forever. At this moment of growing political and social interest in antitrust and revival of antimonopoly sentiment, the balance could tip decisively in favor of Brandeisianism and against the “Curse of Bigness.” Judges could be trained (or retrained) to begin taking the antitrust statutes seriously as statutory texts and begin applying them faithfully using the (contested) methodologies they use as to other statutes. But if judges began taking the texts of antitrust statutes seriously, query whether Congress would continue to write such broad statutes, or whether hydraulic pressures would induce a more sparing approach to antitrust legislation.

#### Clarity solves—overcomes even stringent criticisms of judicial antitrust.

Morton 20—(Theodore Nierenberg Professor of Economics at the Yale University School of Management). Fiona Morton. 2/18/2020. Equitable Growth. "Reforming U.S. antitrust enforcement and competition policy”. <https://equitablegrowth.org/reforming-u-s-antitrust-enforcement-and-competition-policy/>. Accessed 9/13/21.

Reform antitrust statutes to deter and prevent anticompetitive conduct more effectively

Increasing resources and more aggressive enforcement alone will not solve the problem. Judicial decisions interpreting the antitrust laws have significantly ~~crippled~~ [limited] antitrust enforcement. These decisions reflect, at best, an archaic economic understanding of competition or, at worst, simply bad economic reasoning.

Under a series of U.S. Supreme Court decisions over the past decade, for example, it is doubtful that the government could have successfully broken up AT&T’s phone monopoly in the 1980s. That break up, arguably the government’s most successful monopolization prosecution, focused on AT&T’s refusal to allow MCI, a long-distance competitor, to connect its long-distance service to local phone monopolies. In Verizon Communications v. Trinko, the Supreme Court dramatically expanded a monopolists’ ability to avoid antitrust liability when it refuses to deal with competitor or potential competitor, and also implied that antitrust concerns are subordinate in an industry [subjected to the regulation](https://repository.law.umich.edu/cgi/viewcontent.cgi?article=1160&context=mlr).[22](https://equitablegrowth.org/reforming-u-s-antitrust-enforcement-and-competition-policy/#footnote-22) More recently, the Supreme Court misapplied basic economic reasoning in a case that, under some interpretations, has the potential to almost exempt technology platforms from antitrust enforcement: [Ohio v. American Express](https://www.supremecourt.gov/opinions/17pdf/16-1454_5h26.pdf).[23](https://equitablegrowth.org/reforming-u-s-antitrust-enforcement-and-competition-policy/#footnote-23) Since technology platforms comprise an ever-increasing share of economic activity, this situation is of [grave concern](https://www.yalelawjournal.org/feature/multisided-platforms-and-antitrust-enforcement).[24](https://equitablegrowth.org/reforming-u-s-antitrust-enforcement-and-competition-policy/#footnote-24)

Even where the antitrust plaintiffs have been successful, the difficulty and cost of those successes suggest systematic underweighting of the benefits of competition and deference to the desire of the corporation for increased market power. The government’s long battles over stopping pay-for-delay deals and anticompetitive hospital mergers are notable examples of this misalignment, as is the approval by the government of the Sprint-T-mobile merger. In all of these cases, the corporations did not seek that market power on the merits, but through regulation (Trinko or state-supervised hospital mergers), exclusion (pay for delay and American Express), or merger (AT&T-TimeWarner or Sprint-T-mobile).

Despite the government’s success in some merger litigation, this success only occurs in transactions that [most clearly violate the law](https://www.ftc.gov/enforcement/cases-proceedings/171-0231/otto-bock-healthcarefreedom-innovations).[25](https://equitablegrowth.org/reforming-u-s-antitrust-enforcement-and-competition-policy/#footnote-25) The fact that the two antitrust agencies must litigate cases that are clearly anticompetitive—rather than the parties not even considering the deal in the first place or abandoning it after the government makes its concerns known—speaks to the limitations of current antitrust legal doctrine.

It would likely take decades to reverse this body of accumulated legal doctrine, even if every future case that was litigated were decided with perfect accuracy. Fortunately, Congress is the final arbiter on competition law and can change it to reflect the desire of society for competitive markets. Congress has not substantively amended those laws in more than 60 years. A broad foundation of economic research supports retooling our antitrust laws for the 21st century and restoring the vigor that was originally intended. Although legislation can take many forms, successful antitrust reform legislation should accomplish four goals:

Overturn Supreme Court precedent that has inoculated exclusionary conduct

from antitrust scrutiny even when it harms competition by eliminating or harming competitors

Prohibit courts from assuming that some aspect of a market is competitive or will become competitive rather than assessing the evidence in the case

Create simple rules (known as presumptions) that will lower the resource cost of enforcement for conduct and acquisitions that economic research shows are likely to raise competitive problems

Clarify that the antitrust laws are designed to protect competition that may manifest itself across a broad range of outcomes such as higher prices, reduced quality, harm to innovation, lower input prices, and elimination of potential competition

## Cap K

#### Cap “collapsing” doesn’t mean it’s gone tomorrow---might take hundreds of years---we need a strategy for the intermediate period.

Craig **Calhoun 16**. Director of the London School of Economics and Political Science, “The future of capitalism,” Socio-Economic Review, 2016, Vol. 14, No. 1.

Does capitalism have a future? Of course, it does. But it is not necessarily pretty. Wealth can be generated in evermore extensive and intensive ways even in a world full of crises and challenges. And because capitalism is the dominant economic system in the world, it could continue to contribute to climate change, conflict, inequality and instability. But this does not mean it will collapse. The USSR collapsed as a state following a long period of stagnant growth and expensive arms race. This was bracing, perhaps a warning to other states, but not necessarily a model for the end of capitalism. Much critical engagement with capitalism has focused on its internal contradictions and potential collapse. Contradictions are real and collapse is possible, but the language is misleading. We speak of the collapse of the Roman Empire, but this took 300 years of decline, instability and conflict. We speak of the collapse of feudalism, but it would again be more accurate to see a long process of transformation as feudal structures were less able to organize social, economic and even military life, and less able to reproduce key elements of their power structure while gradually states and what we now call capitalism grew. Capitalism has already proved that although it is prone to generating crises, it is not merely a short episode between feudalism and socialism, as the Communist Manifesto implied. It has endured much longer than Marx and Engels thought, and along with the nation-state system dominated global geopolitics and economics for some 400 years. It may well last much longer—but this continued existence could be marked by both growing systemic diffi- culties internal to capitalism and upheavals beyond capitalism that are exacerbated by it and pose challenges to it. Capitalism is more than just markets or economics in general. It is a system of production based on ever more intensive deployment of capital and pursuit of productivity (and profit)— and hence a driver of both expansion and technological and organizational innovation. It is a system of relations between states and other economic actors in which states guarantee forms of property, security of contract and regimes of accumulation. Together these make it a system that drives not only expansion, but also accumulation and concentration of capital. But capitalism is not always the same. In the first place, it always exists in social and political contexts, not in a ‘pure’, abstract form. In the real world, capitalism is always shaped by state support, regulation and mediation of conflicts; states may carry the costs of capitalism’s negative externalities. In addition, capitalism’s internal character varies. Of most immediate importance, since the 1970s, capitalism has seen a dramatic ascendancy of both finance and service work. Industry has not disappeared any more than land lost all value during the industrial revolution. But where perhaps a quarter of capital was held in the form of financial assets 40 years ago, the figure now is about three-quarters. There has been similar proportionate growth in service employment. There may yet be a productivity revolution in service work— though in what proportion that will bring freedom and opportunity ( probably only for an elite) or only low wages and unemployment (for the rest of us) remains to be seen. The claim that we are moving into a ‘sharing economy’ points to some new developments, but fails to address basic structural dimensions of capitalism. To be sure, there is also variation in the forms of enterprise. The development, expansion and international spread of corporations have been remarkable innovations. Corporations may be organized through legal fictions—as artificial persons ‘without a soul to damn or body to kick’—but also as basic social institutions. Firms are almost as important as states. So ubiquitous are corporations (even though legal regimes vary) that it is now hard to recall capitalism before corporate capitalism. More recently, however, corporations have themselves have become commodities bought and sold. From IPOs to mergers and acquisitions, this has enriched financial institutions. It has also made both capital markets and labour markets less stable. And it has brought a real cost in social solidarity. This is shaped by a decline in longterm employment, undermining of ties between firms and their localities, and financial pressures—ever more intensive and short-term—against the provision of health care, pension and other benefits to employees. Likewise, capitalism in any one time or place may be shaped more or less by entrepreneurs and the formation of new enterprises. Entrepreneurs were crucial to the rise of merchant capitalism and in the industrial revolution. They were important in the ‘gilded age’, not just among the robber barons but also in launching a host of family businesses. And entrepreneurs played a central role in the rise of new industries in the last 40 years. There should be appreciation for the creative, enterprising spirit of entrepreneurs. But we should not be blinded by either the hagiography of individuals or the celebration of entrepreneurship in general to think that entrepreneurial successes are quite as individualistic as the ideology suggests. Entrepreneurs depend on social networks and whole ecologies of support from universities to venture capitalists. Much of the achievement of technology firms in the last 40 years has been grounded in commercializing scientific advances that were funded by governments during the cold war—and then, quite remarkably, made publicly available with no claim to property rights by the government on behalf of citizens. The term entrepreneur can be used so elastically as to encompass both those acquiring great fortunes by building companies in Silicon Valley and those working at a near subsistence level as contractors in new service economy businesses—like drivers organized through online booking agencies. Typically paid a fee for each service, these are entrepreneurs only in the same sense that ‘independent’ knitters and weavers were during the industrial revolution. As mechanization of spinning and expansion of markets drove up demand, knitters set up shop in their own homes, often enlisting family members as assistants. They provided their own equipment, sometimes bought on credit, including knitting frames (machines that were human-powered but able to produce much more than simple handwork). They sold their work to intermediaries who ran ‘putting out’ businesses, distributing thread to knitters and collecting finished cloth. As intermediaries, these were arguably the 18th and early 19th century counterparts to Uber and other firms organizing services through ‘apps’. Framework knitting was initially a good occupation, requiring only modest skill though intense concentration and physical labour. But it was an easy business to enter and knitters were eventually driven to work longer and longer hours both to repay their capital costs and to support their families. The creators of self-exploiting tiny businesses, more stable small businesses and ‘start-ups’ that might grow with venture capital and successful public offerings are all important. However, lumping them under the single term ‘entrepreneurs’ can be misleading as can an overly rosy picture of the ‘sharing economy’. Not least of all, states may themselves pursue capitalist ends like expansion of markets and accumulation of capital. They may either own capitalist firms or actively try to manage capitalist enterprise and finance. Even countries in which liberal capitalist separation of state from market was celebrated have used such models. The US accomplished projects like rural electrification partly through state-owned enterprises and partly through preferential financing and state-guaranteed monopolies. Railroads that were initially private ventures were in many countries consolidated as public service companies. Only rarely was there clarity about whether to run them as for-profit firms (thus subsidized the state) or as services funded partly by the state. Still, they demanded investment and generally became more capital-intensive. More strikingly, the Soviet Union was arguably as much an example of state capitalism as of socialism. And today, China is arguably the model for a capitalist future in which the boundary between state and economy is not celebrated—as it has been in the ideology of liberal capitalism. State-related enterprises and direct state organization of finance may be as basic to the near-term future of capitalism as, say, entrepreneurs. Still, capitalism works. Certainly it only works more or less, and not always as well or in the ways we might wish. But it works well enough that it need not reach an end at any specific point. It is a good bet that it will still dominate global economics tomorrow, next year, and when the next crisis comes. But, capitalism is not an order of nature. It is a humanly created historical system. So, it will change. It will likely end, change beyond recognition or continue to exist. It will almost certainly lose its capacity to dominate. Capitalism is good at some things, not others, and actively bad at some. It is good at creating wealth and driving innovation, indeed extraordinarily good. Even Marx and Engels praised capitalism for this (though they thought it was important at some point to say ‘we have enough, let’s concentrate on how wealth is shared’). Capitalism’s capacity to create wealth is why less developed countries are betting on it today. But by comparison, capitalism is bad at equitable distribution. It is not necessarily worse than all other systems: feudalism and slave societies are hardly models of equitable distribution of wealth. But arguably because capitalism depends on consumer markets it needs distribution of wealth to survive. It thus operates in an uneasy (or outright denied) collusion with trade unions and other mechanisms that increase returns to labour and with states that ensure some levels of distribution of wealth. High employment industries may make distribution of wealth (and thus funding of consumer markets) easier; the erosion of industrial employment makes this harder, at least temporarily. Of course, capitalism’s extraordinary ability to generate wealth is not counterbalanced only by problems of distribution. Capitalism also produces the opposite of wealth—which is not poverty but what John Ruskin called ‘illth’. Illth is bad stuff: accumulation of waste, pollution of air and water and even climate change offer good examples. But so do erosions of social solidarity and mutual support systems. States often step in to deal with illth and other negative externalities of capitalism. This is what Karl Polanyi analysed as the ‘double-movement’ of capitalism that led to the rise of the welfare-state. There are also market-based solutions, however, like insurance companies. And philanthropy is also sometimes important, channelling privately accumulated capital to public purposes. But one way or another, illth and negative externalities demand attention. So, what challenges capitalism now? There is still risk—indeed high probability—of systemic financial crises. Addicted to finance and growth, the world continues to hope that the source of so much recent upheaval can become the source of salvation from it. The dominance of finance in contemporary capitalism ties every country into a global system that has risks built into its very architecture. Some apparent solutions—like the spreading of risk through markets for derivatives—create new and intensified risks. So far, ‘financial engineering’ has helped create great fortunes but it has not produced the equivalent of bridges that do not collapse. And when financial crises have come, the prevailing pattern of response is to turn private problems into public ones— for example by nationalizing the toxic assets of failing banks. And yet we do not know what to do except invest. Risk can be mitigated, though this depends on both good analyses and organizational will. Financial markets, instruments and contractual agreements are extraordinarily complex. Unfortunately, the financial system is poorly understood even though it is the product and object of brilliant research. This reflects not just complexity, but the extent to which the study of finance is bound up with the production of ‘financial engineering’ products that can actually work in practice. For example, unrealistic assumptions like unlimited liquidity are embedded into algorithms that price derivatives (and indeed to some extent organize derivatives markets). This is not an error; it is a way of accomplishing effective pricing—except in those times where liquidity limits do become significant, in which cases the system is prone to crisis. Both the complexity of the global financial system and its systemic risk are increased by organizational factors. The system is not the product of some moment of rational planning. It grew by accretion and incremental if rapid change. Different actors set out to solve different problems: expanding mortgage availability to expand home ownership, for example, or attracting funding to new business ventures, or building transportation and communication infrastructures. These are organized through different firms and government agencies. There is innovation in law (derivatives are contracts) as well as in finance per se, so different professions are involved with their different perspectives. The development of regulation usually lags, but so does the development of organizational competence even in private firms. Senior executives may not have full understanding of what subordinates—say traders—are doing and how it creates risks. ‘Silos’ separate different functions within firms, for example, and give different knowledge and incentives to traders, risk officers and general managers. The risk is also exacerbated when international regulation and risk management is weak. This can also be a problem of inadequate understanding (and inadequate access to information, which is largely in the hands of firms with proprietary interests in it). But there is a deeper problem. International cooperation is weak on a number of different dimensions and policy areas, even while it is as crucial as ever. The financial crisis showed how difficult it was to generate effective cooperation for changes to financial processes, not just at the global level but even within Europe—which found its institutions unexpectedly inadequate even after decades of development. The Bretton Woods institutions face new challenges, including a proliferation of alternative mediators of global finance from the BRICs bank to the Asian Infrastructure Investment Bank led by China and the US development of alternative regional trade agreements. But insufficient international cooperation in finance is mirrored by weaknesses in other areas: refugee and security policies are notable examples at the moment. In any case, difficulty organizing effective and efficient regulation and support institutions for global finance multiplies risks. But the risks do not just concern financial collapse. They concern the possibility that no solutions will be found to paying for the costs externalized by capitalist firms. Another challenge for capitalism, also made evident in the financial crisis, is the huge scale of what we might call ‘unofficial capitalism’. This is wealth and flows of wealth that are unrecorded or incompletely recorded, and perhaps more importantly unregulated or ineffectively regulated. Some of this derives from organized crime, including trafficking in drugs, arms and people. But some of it derives simply from tax evasion. Whatever the provenance of illicit capital, it amounts to trillions of euros trading in dark or at least obscure markets, and sometimes mingling with more legitimate capitalism in destabilizing ways. The flow of Russian money into Cyprus before the crisis of 2012–2013 was an example. Of course, unofficial economic activity helped many people survived financial crisis and austerity policies. There are relatively benign, small-scale forms of off-the-books enterprise in certain businesses and ‘alternative economies’. Even these, however, deprive states of revenues that could be used to finance social expenditure. The impact of large-scale illicit capitalism is much greater. Diversion of funds into illicit capitalism and weak international cooperation are both factors in widespread destruction of the political and social conditions for capitalism. Even more basically, this is driven by financial capitalism itself and accompanying market fundamentalist ideology. There has been a weakening of welfare states. This is often a matter of explicit state policy. Privatization may be driven by pro-market views, but also by criticism of inefficiencies in actual bureaucracies. It is also often driven by state fiscal challenges, which are in turn shaped by difficulty collecting taxes (not least where it is easy for money to flow across borders). Another way of looking at this is that it costs a lot of money to deal with capitalism’s externalities. There are the costs of coping with illth, and there are the costs of providing education, health care, unemployment benefits and community services that not only sustain national populations and thus stabilize society, but also lower costs to capitalist firms—e.g., of skilled and healthy workers. The weakening of welfare states is only one example of much more pervasive institutional deficits. Corporations themselves can be important social institutions that provide their members with what amount to welfare benefits and even some sense of community. But long-term corporate employment and benefit structures are in decline, subjected to shortterm financial market pressures influenced by the ideology of ‘shareholder value’. In other words, institutions of basic social importance are being made responsive only to one class of interests—those of investors. Assertions of value for other stakeholders are generally less effective. Other directly economic factors also challenge capitalism, such as unemployment, inequality and slow (or negative) growth. These are potentially disruptive to the capacity to realize profits, but also to social solidarity. At the same time, we should not underestimate how hard people try to make existing systems work, to find their way to enough material resources and social integration for their own lives. They do this in part by continuing to participate in capitalist system. It is a source of frustration for many, though they do not always identify their personal problems with this systemic source. It also a widespread source of hope—not least in many poorer and developing countries. People continue to seek jobs and start businesses. And this is a matter of emotional attachments as well as economic practicality. To those optimistic about revolutions, I would stress that these do not often turn out very well. In addition, one distinctive feature of the recent and in some ways continuing financial crisis has been the near-absence of anti-systemic movements. There have been occupations of public spaces, though these have been focused more on failures of government and power of global finance than on capitalism as such. There are populists on both Left and Right, but almost no real socialist mobilization. There are remarkable experiments in local-level alternative economies of barter and mutual support. But there are not large-scale movements for truly transcending capitalism and replacing it by an alternative scalable economic system. So, what could happen? Well, yes, capitalism could collapse. If this happens, purely economic calamity will likely be entwined with war and environmental disaster. If any historians survive this apocalypse, they will argue over whether capitalism caused the catastrophe, or only exacerbated other problems like climate change failures of international cooperation or decline in social solidarity. There could also be technological or other innovation that reinvigorates aspects of capitalism and deals with some of its costly externalities. Opportunities for expansion of capitalism’s reach are shrinking as it reaches the whole world. Still, there could be indefinite continued intensification. The liberal hope that capitalism and democracy are somehow naturally linked is likely to be proven specious. Capitalist democracies may persist, but more state-authoritarian versions of capitalism are at least as likely to prosper. Global integration will not bring homogeneity, but diversity of political, economic and social arrangements. Governments will attempt to compensate for problems created by capitalist development. This may bring aspects of Polanyi’s double movement, but probably not a renewal of the welfare state project—and ( perhaps ironically) particularly not in democratic states. How much states can do and how well will depend on how they are linked in international cooperation, at regional as well as global levels. In any case, though, it is important to look at whether compensation for illth and positive virtues of solidarity may be produced in other ways, including in business institutions, philanthropy and social entrepreneurship. Small achievements in mitigating problems are worth the effort and worth cherishing. But neither reducing inequality nor stemming climate change is easy, and neither is likely without trade-offs with freedom or growth. What seems very unlikely is a pure collapse or revolutionary transformation creating socialism. If capitalism is to be replaced by a new dominant economic form, this is likely to come about through a prolonged period of ambiguity, difficulty and conflict. The end of capitalism may be more like the end of the Roman Empire or of feudalism than like the end of the Soviet Union. In this context, creating and defending islands of civility, solidarity and relative social justice may be a challenging but crucial project.

#### Competition solves their impacts and is the most effective means of solving collective action problems---their ev only assumes unhealthy competition, which the plan solves

Joseph Heath 7, Professor of philosophy at the University of Toronto, “An Adversarial Ethic for Business: or When Sun-Tzu Met the Stakeholder”, Springer, 2007, Journal of Business Ethics 72:359-374

As soon as another buyer or seller enters the market, however, the strategic situation changes completely. The presence of multiple buyers and sellers dramatically reduces the ability of any one

buyer or seller to make a credible ‘‘take-it-or-leave-it’’ offer. If the price that the sellers are charging is above the price at the point where supply and demand curves intersect, then they will wind up with unsold goods at the end of the day. If they are both charging the same price, then one can assume that they will split the sales between them, and so both wind up with unsold goods. Yet this creates a temptation for both sellers. By dropping the asking price somewhat, it should be possible to sell one’s entire inventory. The loss of revenue caused by the lower price will then be made up for by the increased volume of sales. Of course, if one seller does this, then the other has no choice but to respond in kind. The result is lower profits for both of them. This competition will continue until the volume of sales at a given price level leaves neither of them with unsold goods. This is the point at which supply and demand curves intersect (which is why the price at that point is known as the ‘‘market clearing’’ price). The same sort of competition develops among buyers in cases where the price is lower than the market-clearing price – some buyers will be left with unsatisfied demand at the end of the day, and so will have an incentive to defect, by paying more than the going rate, in order to guarantee that they secure enough of the good.3

Clearly, it is not in the joint interest of either suppliers or buyers to compete with one another in this way. Thus, the reason that price competition is desirable is not that it benefits the people involved, but rather that it generates external benefits for society at large. In this respect, it is quite similar to athletic competition. But what are these external benefits, in the case of the competitive market? When suppliers compete with one another it benefits buyers, and vice versa. Thus the competitive market works to eliminate ‘‘deadweight losses’’ from the economy, ensuring that the maximum number of mutually beneficial economic exchanges take place. But more importantly, a competitive market also gives rise to a set of prices, which provide crucial information to everyone else in society about the relative scarcity of the various resources, skills,

goods and services being exchanged. In the same way that an infrared camera takes invisible light and converts it to a wavelength that the human eye can see, the competitive market takes people’s invisible preferences regarding both production and consumption and converts them to something that can be observed with the naked eye, viz. prices. This is what makes economically rational decision-making even roughly possible in every sector of the economy, including the public sector. The operation of the price system therefore allows for a more efficient (i.e. less wasteful) use of resources and labor.

Furthermore, the failure on the part of either producers or buyers to compete with one another can cause considerable mischief, insofar as it sends the wrong ‘‘signals,’’ via the price mechanism, to other economic actors. When suppliers, through collusion or cartelization, are able to maintain prices for some good at above-market-clearing rates, it suggest that there is ‘‘not enough’’ of that good, and so encourages a shift of resources away from other economic activities towards increased production of that good, combined with a shift among consumers toward goods that serve as substitutes (assuming such are available). Similarly, when buyers form a ‘‘consumer co-op,’’ or some similar organization, in order to hold out for lower prices, it sends the signal to suppliers that there is ‘‘too much’’ of the relevant good, and so encourages them to shift investment out of that sector.

This is, of course, the substance of ‘‘invisible hand’’ arguments for the market since Adam Smith. It is why David Gauthier, in his article ‘‘No Need for Morality: The Case of the Competitive Market,’’ argues that in market transactions, moral constraints ‘‘would be not merely pointless, but positively harmful’’ (Gauthier, 1982, 54). One is not merely encouraged to act non-cooperatively in a competitive market, social welfare considerations require one to do so, because the price mechanism requires competition in order to generate the right information about the relative scarcity or need for different goods.

Of course, it is important to recognize that there is nothing magical about the ability of markets to transform private vices into public virtues. This sort of laundering is a general feature of all competitively structured social interactions. And like all other forms of competition, market competition must be governed by a set of rules, restricting the range of strategies that individuals may employ, in order to ensure that it remains healthy. For suppliers, offering to sell at a lower price – and making the necessary changes in the production process that will enable one to do so – is the most important permissible strategy. Adjusting the quantity that is supplied, and making improvements in product quality are also permissible.

But like every other form of competition, market competition also has a tendency to go off the rails when improperly regulated. In principle, there is no reason why firms could not compete with one another by blowing up each others’ factories and hiring assassins to kill each others’ CEOs. Such a scenario is no less implausible than figure skaters sending out thugs to kneecap their opponents. In fact, one need only look at the experiences of the 364 various ‘‘transition economies’’ in the former Communist bloc to see the sort of outrageous behavior that improperly regulated marketplace competition may generate. For example, in 1994, shortly after the privatization of agriculture and food production in Hungary, the country was swept by an epidemic of lead poisoning. After searching far and wide for the cause, doctors and scientists finally tracked down the source of the problem. Manufacturers of paprika – a staple of Hungarian cuisine – had been grinding up old paint, much of it lead-based, and adding it to the spice in order to improve its color. The practice was so widespread that officials in Hungary were forced to order all the paprika in the country removed from store shelves and destroyed. This is a clear example of firms using an impermissible strategy – exploiting an information asymmetry – in order to compete, and other firms being forced to do the same, in order to retain position. The race to the top of the competitive market is thereby transformed into a race to the bottom, one that can have devastating consequences for the society at large.

#### Necropolitics is self-limiting and open to reversal

Mitropoulos 5 – Angela Mitropoulos, Graduate of La Trobe University’s Department of Sociology and Anthropology, "Necropolitics", October 16, http://archive.blogsome.com/2005/10/16/necropolitics-war/

Mbembe concludes the essay by arguing that the concept of biopolitics might be better replaced with necropolitics, and he discusses suicide bombings at some length, in a pretty interesting way. But I am not sure I would follow him there with respect to the question of bios versus necros. They don’t seem to me distinguishable. The nexus between life and death politics is surely complicated not only by ‘the right to life’ (and the politics that attend it), but also by the reorganisation of so-called health and welfare policies, pharmacapitalism and its geopolitics, the proprietisation of genes, and so on.  But, maybe more than that, I would be inclined to think the following (the transition between the territorial state to a mobile war machine, as Mbembe puts it)through a more detailed discussion of the why and how of so-called ‘failed states’ in relation to their inability to give effect to the control over populations (and not simply resources). He talks about the ‘erosion’ of their ability to control, but there’s no discussion of what it was that eroded this. In that sense, it’s left open to characterise this erosion in terms not of people’s struggles but of processes that occur ‘above their heads’ as it were. Thereby reducing them to objects of the war machines’ movements, but not capable of movement themselves.

#### Undoing squo power relations requires analyzing and attacking power structures through pragmatic struggle---normative appeals alone are ineffective.

Naomi **Zack 17**. Professor of philosophy at the University of Oregon. 02/2017. “Ideal, Nonideal, and Empirical Theories of Social Justice: The Need for Applicative Justice in Addressing Injustice.” The Oxford Handbook of Philosophy and Race, Oxford University Press.

Ideals of justice may do little toward the correction of injustice in real life. The influence of John Rawls’s A Theory of Justice has led some philosophers of race to focus on “nonideal theory” as a way to bring conditions in unjust societies closer to conditions of justice described by ideal theory. However, a more direct approach to injustice may be needed to address unfair public policy and existing conditions for minorities in racist societies. Applicative justice describes the applications of principles of justice that are now “good enough” for whites to nonwhites (based on prior comparisons of how whites and nonwhites are treated). Social information just dribbles in, bit by bit, and we simply get used to it. A single story about a person really hits home at once, but the grinding injustices of daily life are endured. It is easy to ignore them and we do. Judith Shklar, The Faces of Injustice (Shklar 1990, 110) IDEAL theory about justice extends from Plato’s Republic to John Rawls’s A Theory of Justice, including many careers devoted to analyses and criticism about such texts in political philosophy. Rawls offers a picture of the basic institutional structures of a just society, on the premise that in order to correct injustice, we must first know what justice is. According to Rawls, while “partial compliance theory” studies the principles that govern how we are to deal with injustice, full compliance theory, or ideal theory, studies the institutional principles of justice in a stable society where citizens obey the law. Rawls began A Theory of Justice with the claim: “The reason for beginning with ideal theory is that it provides, I believe, the only basis for the systematic grasp of these more pressing problems” (Rawls 1971, 8). Rawls’s ideal theory is too abstract to correct injustice or provide justice for victims of injustice in reality, because it is based on a thought experiment and the assumption of a “well-ordered” society in which there already is compliance with law (Zack 2016, 1–64). What people care about in reality concerning justice is not what ideal justice is or would be, but how immediate injustice can be corrected. Injustice is always specific in concrete events that are recognizable as certain types, for example, theft, murder, or police racial profiling. Injustice can be corrected by punishing those responsible for it in specific cases and instituting social changes that prevent or reduce future occurrences of the same type. Rawlsian nonideal theories of justice, constructed for societies where people do not comply with just laws, rely on ideal theory as a standard for just institutional structures. The main question driving nonideal theory is how to construct a model or picture of justice that will result in the future correction or avoidance of present injustices. John Simmons quotes John Rawls from Law of Peoples, on this matter. Nonideal theory asks how this long-term goal might be achieved, or worked toward, usually in gradual steps. It looks for courses of action that are morally permissible and politically possible as well as likely to be effective [LOP p. 89]. (Simmons 2010, 7) However, injured or indignant parties may not care about the long-term goal of justice that could lead to balance or compensation for their situations. Not only are what P. F. Strawson (1962) called “reactive attitudes,” such as moral indignation, blame, and a desire for deserved punishment, strong in their focus on injustice, but the best theory of justice in the world does not tell us what to do about the injustices we are faced with in the here and now, especially “the more pressing problems” of race-related injustices. Such questions cannot be answered with reference to ideal theory or some application of ideal or nonideal theory to their concrete situations, because the a priori nature of both of these does not provide a fit with specific contingencies—ideal and nonideal theories do not generate practical bridge principles. As theories, they posit ideal entities, but without the apparatus of scientific theories which provides connections to observable entities or events. (Moulines 1985). The correction of injustice or injustice theory requires a philosophical foundation for itself. Models of justice have often been naïvely utopian throughout the history of philosophy, because they are based on an assumption of automatic total compliance, as though the right words or pictures by themselves have the power to transform reality, or as though agreement with those right words or pictures will automatically result in action that will automatically make the world instantiate those words or pictures. When they are not fantastically and ineffectively utopian in this way, such models have been used to justify the already-existing dominance of some groups over others. (A prime example is John Locke’s Second Treatise of Government, written decades before 1688 Glorious Revolution, to express the interests of the new rising class of landed gentry, which were eventually fulfilled by a Protestant king on the throne and a strong representative parliament after that revolution [Laslett 1988].) Models of justice have legitimately served to inspire law in modern societies with government constitutions and national and local law. But, sometimes, as in US founding documents, although universal and absolute justice is proclaimed, subsequent events make it clear that this language was intended to legitimize just treatment for members of selected groups only, that is, white male property owners, at first. As a result of just law and its selective application, over time, there comes to be justice for an expanding group, but still not everyone in society. However, what is written, together with descriptions of real justice for some, can be a powerful lever for obtaining justice for at least some of the excluded. To understand how that works, it is necessary to develop an approach to justice that begins with injustice, in real situations where there is already some degree of justice in a larger whole. The extension of existing practices of justice to members of new groups is applicative justice, a concept with substantial historical and intellectual precedent, although not by that name. In what follows, more will be said about the idea of applicative justice and then its history will be considered. Voting rights and housing rights are examples of candidates for applicative justice in our time. Finally, content in the form of narrative may be motivational for social change. The Idea of Applicative Justice Applicative justice is an approach to justice with the goal of making the unjust treatment of some comparable to those who already receive just treatment. Applicative justice takes a comparative approach, for example, comparing how young black males are treated by police officers in contemporary US society, to how young white males are treated (Jones 2013; Zack 2013, 2015). Applicative justice rests on a pragmatic approach to social ills, which includes the premise, based on Arthur Bentley’s 1908 insights in The Process of Government, that government is much more than the apparatus of state and written laws and court decisions. Government is an extended, dynamic process, an ongoing contention among interest groups in society. This full-bodied, empirical and pragmatic view of government process entails, for example, that we consider as parts of the same political mix/phenomenon/raw material all of the foregoing: the Fourth and Fourteenth Amendments, the 1960s Civil Rights Legislation, doctrines of probable cause, the disproportionate incarceration of African Americans, racial profiling, and police homicide with impunity. Thus, Rawls’s insistence that “the rights secured by justice are not subject to political bargaining or to the calculus of social interests” (Rawls 1971, 4), should be understood as “the rights secured by justice should not be subject to political bargaining or to the calculus of social interests.” In reality, “the rights secured by justice” are constantly subject to political bargaining and the living calculus of social interests

. One consequence of this empirical perspective is that moral outrage, critiques of white supremacy, or analyses of white privilege, along with other forms of blame, cannot be assumed to have the power to change anything, by themselves. By contrast, changing relationships between police officers and their local communities, or changing the rules of engagement when police stop or attempt to stop suspects, might on this view have some causal power (Ayres and Markovits 2014). It is important to realize that such changes in practice would not be specific applications of a theory of justice, but ways of changing social reality into a different political mix. However, a better theory of justice, even a more racially egalitarian one and even a theory of applicative justice that was widely accepted, would still be no more than a change in what Bentley calls “political content.” Any theory of justice or any set of just laws is compatible with widespread racially unequal and unjust practice. And the converse also holds. Unjust laws or laws with gaps for unjust practice are compatible with just practice. Thus, applicative justice is pragmatic in taking the whole political mix/ phenomenon/raw material as its subject for a specific injustice. Unlike ideal or nonideal justice theory, the applicative justice approach brooks little faith that reality can be changed by a special conceptual space or mode of critical moral discourse that is undertaken apart from reality. Reality cannot be changed by normative pronouncements, by or on behalf of the oppressed, but only by shifts in existing interests of groups of real people. To base hopes for change on normative content alone may ~~paralyze~~ [eliminate] the means for taking action that could result in change, because such content proceeds as though matters of justice were only matters of argument. Those who have opposed social racial justice have understood this well enough, because instead of mainly arguing against new just law over the twentieth century, they have taken action to block progress. Race and Justice Consideration of race and injustice together, within political philosophy, focuses on the need for specific groups to not be treated unjustly. For a group to be treated justly, a large number of its members need to be treated justly. But for a group to be treated unjustly, it is sufficient if a smaller number or lower proportion than required to meet the standard of just treatment be treated unjustly. One reason for this asymmetry is that just treatment is easily normalized within communities, whereas unjust treatment of only a few is disruptive and considered abnormal among other members of the group to which victims belong (although not necessarily by members of groups who are generally treated justly). The unjust treatment of a small number ripples from their friends and relations to other members of the same group, who realize that they are subject to similar unjust treatment from their membership in that group alone. More broadly, if the group treated justly and the group treated unjustly belong to the same larger collective, such as whites and blacks in the United States, then the unjust treatment of even a very small number of that total collective of residents or citizens should be disruptive to the whole collective, given promulgated principles of “justice for all.” But that does not always happen, at least not in ways that result in real change. Apathy and self-absorption of those not treated unjustly is part of the reason, although another significant part is that the group treated justly already knows that the national collective rhetoric of justice is intended to apply primarily to them. It is that kind of disparate treatment, which does not disrupt everyone, even though it should, which calls for a theory of applicative justice, on the abstract level where people call for justice. But applicative justice is not only an abstract theory. Applicative justice requires comparisons of group treatment. If minorities are treated unjustly, a description of that injustice does not require an ideal or nonideal theory or model of justice, but simply a comparison with how the majority is treated. (The term “minorities” refers to those disadvantaged or oppressed, because sometimes minorities are greater in number than “majorities,” e.g., blacks under apartheid in South Africa, American slaves in some Southern states, or black Americans in some twenty-first-century cities.) The principles and mechanics of justice that work well enough for most white Americans need to be applied to nonwhite Americans. For rhetorical purposes, it might be evocative to talk about black lives or black rights, but strictly speaking the subject is a racial framework that is color-blind in an important part of law—constitutional amendments and federal legislation—but not in reality. This gap between written law and social reality can be viewed as hypocrisy, racial bias, or white supremacy, only if one assumes that written law is an accurate description of, or blueprint for, social reality. But a perspective that takes in the whole process of government reveals that the gap and what is permissible within it, are parts of the same whole process. The contrast between blueprints and maps is important to consider. Political philosophers often proceed as though their writings about justice are blueprints, when they should instead begin by constructing maps. Present politics or a political party in power may present obstacles and challenges to applicative justice in any specific case. Those who aim for applicative justice must struggle against such obstacles and challenges, as well as the ignorance, prejudice, and ill will of large parts of voting publics under democratic government, and in addition, media misrepresentations, business interests in a status quo, and lack of understanding of oppression by those who are treated unjustly. For example, the injustice in the disproportionately large number of African Americans in the US criminal justice system has been supported by law-and-order politics, the War on Drugs, belief in racial gender myths (e.g., the larger-than-life black rapist), explicit racism, media sensationalism of crime committed by black men, profits made by for-profit prison corporations, and embrace of self-destructive subcultures by some black men who become incarcerated. At the same time, as an efficient cause or precipitating factor, ongoing racial profiling by police helps feed the system with new suspects, about 90 percent of whom plead guilty in preference to the risks and costs of a trial (Kerby 2013; Rakoff et al. 2014). Intergenerational poverty, unemployment, and undereducation contain people within this system, and the high rates of nonwhites in the prison population are used as official justification for racial profiling (Zack 2015, chap 2). Thus, the complexity of causes and background factors associated with the disproportionate number of African American male prison inmates can be understood through a number of approaches. The normative approach of applicative justice would be to address those causes or factors, distinctly and individually, through specific changes in concrete practice, as well as changes in law, as relevant.

#### Growth is sustainable, physical limits aren’t absolute, AND resource use is declining now---the alt unleashes global disaster

Ronald Bailey 18, B.A. in 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 Degrowth the Only Way to Save the World?” https://reason.com/2018/02/16/is-degrowth-the-only-way-to-save-the-wor

Unless us folks in rich countries drastically reduce our material living standards and distribute most of what we have to people living in poor countries, the world will come to an end. Or at least that's the stark conclusion of a study published earlier this month in the journal Nature Sustainability. The researchers who wrote it, led by the Leeds University ecological economist Dan O'Neill, think the way to prevent the apocalypse is "degrowth."

Vice, pestilence, war, and "gigantic inevitable famine" were the planetary boundaries set on human population by the 18th-century economist Robert Thomas Malthus. The new study gussies up old-fashioned Malthusianism by devising a set of seven biophysical indicators of national environmental pressure, which they then link to 11 indicators of social outcomes. The aim of the exercise is to concoct a "safe and just space" for humanity.

Using data from 2011, the researchers calculate that the annual per capita boundaries for the world's 7 billion people consist of the emission of 1.6 tons of carbon dioxide per year and the annual consumption of 0.9 kilograms of phosphorus, 8.9 kilograms of nitrogen, 574 cubic meters of water, 2.6 tons of biomass (crops and wood), plus the ecological services of 1.7 hectares of land and 7.2 tons of material per person.

On the social side, meanwhile, the researchers say that life satisfaction in each country should exceed 6.5 on the 10-point Cantril scale, that healthy life expectancy should average at least 65 years, and that nutrition should be over 2,700 calories per day. At least 95 percent of each country's citizens must have access to good sanitation, earn more than $1.90 per day, and pass through secondary school. Ninety percent of citizens must have friends and family they can depend on. The threshold for democratic quality must exceed 0.8 on an index scale stretching from -1 to +1, while the threshold for equality is set at no higher than 70 on a Gini Index where 0 represents perfect equality and 100 implies perfect inequality. They set the threshold for percent of labor force employed at 94 percent.

So how does the U.S. do with regard to their biophysical boundaries and social outcomes measures? We Americans transgress all seven of the biophysical boundaries. Carbon dioxide emissions stand at 21.2 tons per person; we each use an average of 7 kilograms of phosphorus, 59.1 kilograms of nitrogen, 611 cubic meters of water, and 3.7 tons of biomass; we rely on the ecological services of 6.8 hectares of land and 27.2 tons of material. Although the researchers urge us to move "beyond the pursuit of GDP growth to embrace new measures of progress," it is worth noting that U.S. GDP is $59,609 per capita.

On the other hand, those transgressions have provided a pretty good life for Americans. For example, life satisfaction is 7.1; healthy life expectancy is 69.7 years; and democratic quality stands at 0.8 points. The only two social indicators we just missed on were employment (91 percent) and secondary education (94.7 percent).

On the other hand, our hemisphere is home to one paragon of sustainability—Haiti. Haitians breach none of the researchers' biophysical boundaries. But the Caribbean country performs abysmally on all 11 social indicators. Life satisfaction scores at 4.8; healthy life expectancy is 52.3 years; and Haitians average 2,105 calories per day. The country tallies -0.9 on the democratic quality index. Haiti's GDP is $719 per capita.

Other near-sustainability champions include Malawi, Nepal, Myanmar, and Nicaragua. All of them score dismally on the social indicators, and their GDPs per capita are $322, $799, $1,375, and $2,208, respectively.

The country that currently comes closest to the researchers' ideal of remaining within its biophysical boundaries while sufficient social indicators is…Vietnam. For the record, Vietnam's per capita GDP is $2,306.

"Countries with higher levels of life satisfaction and healthy life expectancy also tend to transgress more biophysical boundaries," the researchers note. A better way to put this relationship is that more wealth and technology tend to make people happier, healthier, and freer.

O'Neill and his unhappy team fail drastically to understand how human ingenuity unleashed in markets is already well on the way toward making their supposed planetary boundaries irrelevant. Take carbon dioxide emissions: Supporters of renewable energy technologies say that their costs are already or will soon be lower than those of fossil fuels. Boosters of advanced nuclear reactors similarly argue that they can supply all of the carbon-free energy the world will need. There's a good chance that fleets of battery-powered self-driving vehicles will largely replace private cars and mass transit later in this century.

Are we about to run out of phosphorous to fertilize our crops? Peak phosphorus is not at hand. The U.S. Geological Survey (USGS) reports that at current rates of mining, the world's known reserves will last 266 years. The estimated total resources of phosphate rock would last over 1,140 years. "There are no imminent shortages of phosphate rock," notes the USGS. With respect to the deleterious effects that using phosphorus to fertilize crops might have outside of farm fields, researchers are working on ways to endow crops with traits that enable them to use less while maintaining yields.

O'Neill and his colleagues are also concerned that farmers are using too much nitrogen fertilizer, which runs off fields into the natural environment and contributes to deoxygenated dead zones in the oceans, among other ill effects. This is a problem, but one that plant breeders are already working to solve. For example, researchers at Arcadia Biosciences have used biotechnology to create nitrogen-efficient varieties of staples like rice and wheat that enable farmers to increase yields while significantly reducing fertilizer use. Meanwhile, other researchers are moving on projects to engineer the nitrogen fixation trait from legumes into cereal crops. In other words, the crops would make their own fertilizer from air.

Water? Most water is devoted to the irrigation of crops; the ongoing development of drought-resistant and saline-tolerant crops will help with that. Hectares per capita? Humanity has probably already reached peak farmland, and nearly 400 million hectares will be restored to nature by 2060—an area almost double the size of the United States east of the Mississippi River. In fact, it is entirely possible that most animal farming will be replaced by resource-sparing lab-grown steaks, chops, and milk. Such developments in food production undermine the researchers' worries about overconsumption of biomass.

And humanity's material footprint is likely to get smaller too as trends toward further dematerialization take hold. The price system is a superb mechanism for encouraging innovators to find ways to wring ever more value out less and less stuff. Rockefeller University researcher Jesse Ausubel has shown that this process of absolute dematerialization has already taken off for many commodities.

After cranking their way through their models of doom, O'Neill and his colleagues lugubriously conclude: "If all people are to lead a good life within planetary boundaries, then the level of resource use associated with meeting basic needs must be dramatically reduced." They are right, but they are entirely backward with regard to how to achieve those goals. Economic growth provides the wealth and technologies needed to lift people from poverty while simultaneously lightening humanity's footprint on the natural world. Rather than degrowth, the planet—and especially its poor people—need more and faster economic growth.

#### Tactical reliance on neolib is key to solve their impact---waiting for the alt unsustainably delays

Alyssa Battistoni 17, editor at Jacobin and a PhD student in political science at Yale University, 8-15-2017, "Within and Against Capitalism," Jacobin, https://jacobinmag.com/2017/08/within-and-against-capitalism

But for as long as climate change has been on the political agenda, neoliberalism has been ascendant. Which means the discussion among elites today is filled with pseudo-solutions to the problem: guilt-laden appeals to individuals to take personal responsibility for their consumption; green technologies developed with public funds by private companies that hold the patents; market mechanisms designed by the industries they ought to be demolishing; executive orders that propose to keep the tides at bay without causing too much of a fuss. Meanwhile, austerity measures are starving public goods and services just when we should be expanding them and resurgent nationalist movements are closing borders as we should be reaching across them. Those who have the least to lose from global warming are leading us down a road to disaster that will hit black and brown, poor and working-class people first and hardest — both the literal disasters that will strike more sharply and frequently, and the social catastrophes that will follow if right-wing movements are able to successfully turn understandable fear into xenophobic reaction while the wealthy retreat to their luxury bunkers. But the silver lining of the gathering storm clouds is that after years of liberal vacillation dominating the climate discussion, the tide is starting to turn left. Whether it can outpace the rising seas is another question. If capitalism is driving climate change, does that mean we need a revolution to stop it? We should hope not. The Left’s vision of radical transformation can seem like an obvious match for the climate challenge. But the Left remains historically weak and a return to real power on the scale required isn’t likely anytime soon — certainly not on the timescale we need to start taking serious action. We can’t shortcut the long-term project of building socialism — but nor can we sideline climate action along the way. Otherwise, even in the best-case scenario, the Left will win power only to manage a state of increasing climate breakdown. So no matter how necessary a break with capitalism is, for now we’ll have to settle for addressing climate change as best we can within it. That means pushing hard to decarbonize as rapidly as possible in ways that set the stage for a sustainable socialist society. We’ll only be able to do that if our movements have a strong anticapitalist core. Fortunately, climate movements have been steadily moving left, foregrounding climate justice and building alliances with communities on the front lines of both fossil fuel extraction and climate impacts. Indigenous movements have led the way in waging battles in places like Standing Rock that have called global attention to the rapaciousness of fossil fuel companies and articulated connections between the wellbeing of human communities and the ecosystems they depend on. Socialists must join these struggles fighting the inequalities that prefigure eco-apartheid while continuing to build a mass movement fighting to lay the foundations we’ll need to go beyond fossil capitalism. Climate change more than any other issue demonstrates the need for socialism. It points to the need for more democratic political control over industry, technology, and infrastructure; more conscious intention about how we build our world, why, and for whom. Embracing conscious planning of wide sectors of the economy and the power of technology is part of a decidedly “Old Left” vision — but the old hubris about “mastering nature” isn’t. Our socialism is about creating a sustainable politics of joy and abundance for the many. Give us bread and roses — and parks and oceans. Of course, even those classic demands get more complicated when drought threatens wheat crops and flower gardens, as forests burn and oceans acidify. Climate change must be a spur to the Left to think creatively, organize expansively, and act quickly.

#### Neolib isn’t the root cause of militarism

Dr. Bryan **Mabee 11**. Senior Lecturer in the School of Politics and International Relations at Queen Mary, University of London, BA, MA (Manitoba), PhD (Aberystwyth), “LIBERAL MILITARISM IN INTERNATIONAL RELATIONS: REVISITING THE US ‘NATIONAL SECURITY STATE’”, p. 11-13.

Explaining Militarism in International Relations Militarism – conceptualised broadly as preparations for and ideology of war – is often seen as endemic to the international system. Political realists have long expressed a ‘tragic’ account of international politics that sees state-based preparation for war as a consequence of the competitive nature of international relations (e.g. Mearsheimer, 2001; Waltz, 1988; c.f. Leffler, 1992). Historical sociologists such as Michael Mann (1993) have also insisted on the importance of this logic, while stressing the different institutional manifestations of militarism (and other sources of social power) over time. However, even with the structural imperative of geopolitical competition as a base, it still does not help explain variations in state militarism either across time or for individual states: i.e. the specific forms of war preparation that individual states pursue, and how these reflect a particular historical logic. Indeed the explanation that is necessary for the national security state is not why a state such as the US might prepare for war, but why it prepares in a particular fashion. Another prominent explanation for the development of increased militarism in the postwar American state has been through the theory of the ‘military industrial complex’ (MIC) (Roland, 2007; c.f. Koistinen, 1980; Rosen, 1973; Sarkesian, 1972). The theory itself exists in a variety of forms, from the original focus on the undue pressures of defence lobbyists in the case of President Eisenhower’s original warning (Eisenhower, 1961); through concerns about the excessive influence of elites focused on security and war (Lasswell, 1941; Mills, 1956); to a Marxian focus on the economic productivity of defence firms (Coulomb and Bellais, 2008; Mackenzie, 1983). Though the overall postulation of burgeoning ‘military establishment’ (Yarmolinksy, 1971) with ties to business has been highly accurate in describing an institutional form, there are issues with causation that make the account problematic for understanding the national security state. The MIC theory mainly suffers from the opposite problem of the international-structural perspective: that it is based entirely on an internal economic logic, where the dynamics of international relations play no part (Buzan and Herring, 1998). All states are militarized in various degrees through war preparations, which are not easily explained just by domestic political economy

(Mackenzie, 1983). The avoidance of the international dimension of militarization results in a limited account of militarism, even as applied directly to the US state. The MIC also does little to explain the peculiarities of the American system; as Koistinen (1980) has noted, the MIC should really just be part of a broader political economy of American warfare, not just explaining the postwar period. Or, as E. P. Thomson more polemically stated, modern societies ‘do not have military industrial complexes – they are military-industrial complexes’ (quoted in Shaw, 1988: 41). The key problem with these accounts of militarism is that they are both too general in terms of causation (i.e. the structural accounts relying too much on the permissive nature of the international system; the domestic MIC argument relying too much on the capriciousness of the arms industry) while also being reductionist. While it is clear that both the character of international relations and geopolitics are crucial for understanding military competition between states (and hence state militarism), the internal political economy of militarism is crucial for understanding specific manifestations of militarisms. As Smith (1983: 24) argues, ‘Militarism cannot be explained in terms of the objectives of the state alone because these are constrained by the nature of the environment in which the state operates. In particular the nature of the prevailing class relations, the nature of each conflict, and the nature of the instrument itself, military force, all influence the process. Each of these has dynamics of their own which in interaction lead to the development of the various distinct aspects of militarism’.

#### Markets are societally ingrained

Levi **Bryant 12**, Professor of Philosophy at Collin College, “We’ll Never Do Better Than a Politician: Climate Change and Purity,” <https://larvalsubjects.wordpress.com/2012/05/11/well-never-do-better-than-a-politician-climate-change-and-purity/>

It is quite true that it is the system of global capitalism or the market that has created our climate problems (though, as Jared Diamond shows in Collapse, other systems of production have also produced devastating climate problems). In its insistence on profit and expansion in each economic quarter, markets as currently structured provide no brakes for environmental destructive actions. The system is itself pathological. However, pointing this out and deriding market based solutions **doesn’t get us very far**. In fact, such a response to proposed market-based solutions is **downright dangerous** and **irresponsible**. The fact of the matter is that 1) we currently live in a market based world, 2) there is not, in the foreseeable future an alternative system on the horizon, and 3), above all, **we need to do something now**. We **can’t afford to reject interventions** simply because they **don’t meet our ideal conceptions** of how things should be. We have to **work with the world that is here**, not the one that we would like to be here. And here it’s crucial to note that pointing this out **does not entail** that we shouldn’t work for producing that other world. It just means that we have to grapple with the world that is **actually there before us**. It pains me to write this post because I remember, with great bitterness, the diatribes hardcore Obama supporters leveled against legitimate leftist criticisms on the grounds that these critics were completely unrealistic idealists who, in their demand for “purity”, were asking for “ponies and unicorns”. This rejoinder always seemed to ignore that words have power and that Obama, through his profound power of rhetoric, had, at least the power to shift public debates and frames, opening a path to making new forms of policy and new priorities possible. The tragedy was that he didn’t use that power, though he has gotten better. I do not wish to denounce others and dismiss their claims on these sorts of grounds. As a Marxist anarchists, I do believe that we should fight for the creation of an alternative hominid ecology or social world. I think that the call to commit and fight, to put alternatives on the table, has been one of the most powerful contributions of thinkers like Zizek and Badiou. If we don’t commit and fight for alternatives those alternatives will never appear in the world. Nonetheless, we still have to grapple with the world we find ourselves in. And it is here, in my encounters with some Militant Marxists, that I sometimes find it difficult to avoid the conclusion that they are **unintentionally aiding** and **abetting** the **very things they claim to be fighting**. In their **refusal to become impure**, to **work with situations** or **assemblages** as we find them, to **sully their hands**, they end up **reproducing the very system** they wish to **topple** and **change**. Narcissistically they get to sit there, smug in their superiority and purity, while **everything continues as it did before** because they’ve **refused to become politicians** or engage in the **difficult concrete work** of assembling human and nonhuman actors to **render another world possible**. As a consequence, they occupy the position of Hegel’s beautiful soul that denounces the horrors of the world, celebrate the beauty of their soul, while depending on those horrors of the world to sustain their own position. To engage in politics is to engage in networks or ecologies of relations between humans and nonhumans. To engage in ecologies is to descend into networks of causal relations and feedback loops that you cannot completely master and that will modify your own commitments and actions. But there’s **no other way**, there’s no way around this, and we **do need to act now**.

#### Status quo social movements fail – cant reverse neoliberalisation, create political change or trans-nationalize

Petar Kurecic 16, Assistant Professor of Economics at University North, Croatia, 12/26/2016, “Social movements as (in)effective way of struggle against neoliberal geopolitics (i.e. essentially detrimental ideology aimed at destruction of the welfare state)?”, https://www.academia.edu/32030532/Social\_Movements\_and\_Neoliberal\_Geopolitics

Recognition of neoliberalism’s geographies of poverty, inequality, and violence as intertwined across a multiplicity of sites impels us to view its geographies of protest, resistance, and contestation in the same light (Springer, 2011: 553). Because the changes associated with neoliberal policies often had negative distributional impacts on the working class, the poor, the small-business sector, and the environment, diverse forms of resistance and contestation have emerged (Kurecic, 2016: 35)¶ Anyhow, if we have the TNC on one side, then it should probably be most effective to fight its goals and actions with means of social action that transcends national borders – transnational social movements . In other words, transnational demos should be able to fight “the Cabal”.¶ What actually are social movements? Nilsen (2015: 4-5) points out that social movements can be seen as “being simultaneously constituted by and constitutive of praxis, and thus as being situated at the very heart of the making and unmaking of the structures and processes that underpin both social order and social change. Social movements should be understood according to the way how they play a role in shaping and reshaping the current form of given institutional fields and political economies, and taking seriously the basic intention that animates social movements, that is, the intention of moving, of becoming more than what they currently are.”¶ Although neoliberalism’s power to “press upon” stems from its institutional arrangement and hegemonic discourses backed by the United States’ military might (Harvey 2003; Peet 2007), the presence of power that “presses upon” does not negate the possibility of subaltern counter-politics. In fact, the presence of power that presses upon also gives rise to productive power, or the power to resist and transform (Foucault, 1979). The power of those adversely affected by neoliberalism is dependent on their alliances, relations, networks and counterhegemonic discourses (Waquar, 2012: 1063).¶ Social movements typically grow from “cramped spaces”, situations that are constricted by the impossibilities of the existing world with a way out barely imaginable. But precisely because they are cramped, these spaces act as incubators or greenhouses for creativity and innovation (The Free Association, 2007).¶ Social movements of the present day world are definitely thriving because of the two main processes. The first process is the neo-liberally inspired internationalization (which the ideologists of globalization refer to as “globalization”) that increases social inequality in both rich and poor states, concurrently increasing inequalities between the developed and non-developed states, increasing the number of least-developed states. The second is the revolution in information technologies that has invented “new media” and then made them available to significant parts of the world population (in developed states, the percentage of Internet users well surpasses 50%). Internet and its tools have become ubiquitous (Kurecic, 2016: 35).¶ Unfortunately, social movements usually pursue only their national agenda, and their transborder actions are in most cases ineffective. On the other hand, it is very difficult for a politician connected with social movements to be elected in office, on any level, and in any country, hence all the influence, funds, media, and state security apparatuses are acting to prevent any such event to occur. Therefore, the pursuers of progressive agendas always carry an immense burden even before they start a race for office.¶ Castells (2012) has identified over a 100 diffused and on social networks active social movements that have thrived in 2009-2012 period, in various parts of the world, in democratic and developed states (various movements in European states, Occupy Wall Street Movement etc.), as well as in the autocratic regimes of the developing world (for instance, the Arabian Spring movements, protests in Russia against Putin). All these movements used social media as a means of coordinating their actions and announcing their messages to their supporters and to the outside world.¶ However, we have to ask ourselves – what is the results of all these social movements? What has Arab Spring brought to the Arab countries? Stability, prosperity? Not a chance. On the other hand, we are witnessing chaos, terrorism and destruction after the rise of the political Islam. Is Russia a more democratic country than in 2012 before Putin was elected (again) as President? Is Wall Street less predatory

and more socially responsible than it was before the Great Recession and the Occupy Wall Street Movement actions? Maybe it is a bit more regulated. Anything more than that – hardly.¶ In that sense, in their fight against neoliberal geopolitics and the bourgeois capitalist state, social movements have not been very successful. Usually, the elite would make a couple of superficial moves that lowered the levels of tension and social action in a certain society that witnessed the build-up of grievance and social action, manifested through social movements. Then the level of dissatisfaction of the “masses” would exhaust and everything would return to normal, one way or the other. This is, unfortunately a rule when it comes to social action tied with social movements. The trends of neoliberal totalitarian dominance over the economy and politics in most countries of the world have not been reversed. If 62 people have more money than the poorer half of the world’s populations, then it is clear that everything and not just something is deeply wrong. The system needs a reset. Nevertheless, social movements have not been able to reset the system, at least so far.

#### Nuclear restraint propels anti-capitalist change---forgoing the plan dooms the alt.

--nuclear war renders a purely anti-neoliberal victory empty

--arms restrictions undermine bloc politics, hegemonism, and state power

--fracturing movements based on issue creates isolation and collapse

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III. SOCIALISM AND THE NUCLEAR-WEAPONS SYSTEMS It is understandable that some comrades should argue that the danger of nuclear war is now so great that we should set aside all other considerations and unite to achieve disarmament and peace. Anyone who does not at times feel like this is indeed underestimating the appalling immediate dangers. Yet some of us at least must go on to say, first, that specifically socialist analyses of the production and reproduction of these dangers are, while undoubtedly incomplete, still centrally relevant; and, second, that we have still to look to specifically socialist analysis and mobilization to generate the linked forces that will in fact be capable of significantly reducing and finally ending these dangers. This should never be said arrogantly, or within some exclusivist rhetoric. There is an urgent duty on all socialists to join in collaborative campaigns in at least seven general areas: (a) heightening public consciousness of the specific as well as the general dangers of modern missile-nuclear and other weapons systems; (b) exposing the deceptive official campaigns about the possibilities of ‘civil defence’ against nuclear attacks; (c) organizing public pressure for all possible measures of arms limitation and negotiated disarmament; (d) publishing and explaining the details of current weapons development and rearmament, and, in close relation to these, the complex of actual offers, counter-offers and stages of negotiation in limitation and disarmament negotiations; (e) organizing campaigns to widen the negotiating process, not only between states but within societies, thus including opposition to arbitrary secrecy and security controls; (f) demonstrating the real links between nuclear-energy and nuclear-weapons programmes, including the realities of some consequent proliferation of nuclear weapons (as in the newly formed Anti-Nuclear Campaign); (g) opposing the naturalization of arms production and export as part of the economic strategy of the advanced industrial world. This is already a heavy list, yet on each of these issues there is already significant public campaigning and active socialist involvement. What has then still to be asked, however, is whether there are further specific socialist contributions to be made both within collaborative campaigns and independently. Some answers can be suggested in three areas: (i) relations between the concepts of a ‘ruling class’ and a ‘military-industrial complex’, with evident effects on the question of substituting ‘exterminism’ for existing or possible categories of socialist analysis; (ii) the very difficult question of what is called, in some circles, the ‘socialist bomb’ or ‘the missiles of the international working class’; (iii) the problem of linkages between military and economic crisis. The Ruling Class and the ‘Military-Industrial Complex’ It is obviously correct to identify and to stress the specific complex of arms-production, military, research and state-security interests within contemporary advanced capitalist societies. It is also necessary to identify an analogous but far from identical complex within such socialist states as the Soviet Union and China. Yet it is almost certainly wrong, first, to fuse these different formations as a single entity, and, second, to override more general concepts of a ruling class by the priority of these specific complexes. The problem would have to be analytically separated to recognize its specificity within the two contrasting systems, but there are still some preliminary general points. It is of the essence of a ruling class that it possesses a monopoly or a predominance of overt or threatening violence. This is not a consequence of nuclear-weapons systems, and indeed it has been mainly in non-nuclear societies that the specific military-state-security formation has acquired absolute or determining power. The realities of more general productive development have created, in more advanced and complex economies, other effective major formations within the ruling class; and the true political process, at this level, is much more a matter of the shifting relations between these formations than of any inevitable dominance. The military-security formation has major advantages, and these are increased in conditions of international conflict. But just because what it produces is at once so deadly and so negative, it can only temporarily achieve that command of resources and policies which would ensure its stable dominance. It is then true that the present nuclear arms race is producing conditions in which the possibilities of dominance form a rising tendency. Yet the ruling class as a whole still has other interests, both in its own immediate terms and in relation to assuring its continued dominance over the whole life of the society, which must include satisfying increasing non-military economic needs and demands of its people. It has also political interests in its need to present its central objectives in those broader terms which can command a necessary consent or acquiescence. Therefore, no ruling class, and a fortiori no whole social formation, can be reduced to the military-security element. If it is true that the military-security complex, just because of its negativity, moves on its own towards certain ultimate irrationalities, in which the whole social order exists to serve and supply it, it is also true that other ruling-class formations, to say nothing of other classes, exert constant and powerful practical pressures of a different kind, which are then the materials of real politics. The observable fluctuations of military spending programmes and of broad political strategies are the indices of these continuing internal and externally affected struggles. In lieu of more precise analysis of these dangerous internal formations, within the different social orders of the two major systems, we can note certain contradictions. Within capitalist societies, the military and related industries may not, for all their command of research, be a genuine leading sector. Their crude counter-cyclical role, and their privileged rate of profit, can distort the programmes and the interests of the capitalist class as a whole, while their massive levies of public revenue can disrupt investment programmes and produce unintended crisis and socio-economic discontent. The present crisis of ordinary manufacturing industry, with its consequences in major unemployment, is perhaps just such a case, and it is significant that it is often from within the ruling class that campaigns against the ‘military-industrial complex’ have been mounted. Meanwhile in the centralized socialist systems it is evident that the scale of military expenditure is economically crippling and has virtually no advantages for any productive sector. There the linkage is different, between the bureaucratic formation of the ruling class itself and the necessary support of military and state-security formations. The contradiction between an unproductive high-military economy and the dependence of a political leadership on exceptional monopoly of power and force is indeed very dangerous, but is itself reciprocally affected by external developments within the contradictions of its opponent system. Thus we need not conclude that there is any genuine inevitability in the formation and tendency to dominate of these powerful internal sectors. A full analysis must include a recognition of the ‘dysfunctional’ aspects of the arms race for both social systems. ‘The Socialist Bomb’ (sic) The simplest version of the argument that Soviet nuclear-weapons systems are in effect the ‘socialist bomb’, demanding the support of the international working class, scarcely merits attention. It is an inescapable fact of nuclear weapons, with their indiscriminate destruction of whole populations, that they cannot be class-selective. The real consequence of that kind of argument is an impotent alienation and, ultimately, treason against every particular working class. Yet there are more serious arguments, as for example the position taken by Ernest Mandel in 1970. [7] In place of the essentially abstract propositions of ‘international tension’ and the ‘dangers of war’, such arguments begin from the facts of the imperialist world-system, including its ineradicable hostility not only to existing socialist states but to all national liberation struggles which threaten imperialist economic and strategic interests. All socialists who share this analysis of the present world crisis are faced with exceptionally difficult questions when they also, as they must, recognize the extraordinary and quite unprecedented dangers of nuclear war. It is one thing to hold to a strategy of victory against imperialism, but it is quite another to suppose that there can be any victory worth having through the ultimate devastation of a nuclear war. There are then two possible positions. The first, which is more often drifted into than consciously adopted, involves using the legitimate fear of nuclear war, which after all can in the West be very freely expressed and campaigned on, as a way of objectively weakening the imperialist defence systems, thus tilting the strategic balance. The fact that this is constantly alleged, by the right, against every campaign for nuclear disarmament (and then often with ludicrous mis-identifications), ought not to blind us to the fact that it can be, in some cases, objectively and even subjectively true. It would make for intellectual honesty if those who have really adopted this position would say so; elaborating the radical case for a non-pacifist unilateralism. What is wrong with this position (and with any of the tactics and emphases which consciously or unconsciously follow from it) is, however, its uncritical identification of the interests of socialism and of anti-imperialism with the Soviet state. It is necessary, of course, to oppose absolutely all those who wish to destroy or threaten the Soviet state and its allies, or socialist China, or the new revolutionary states. This involves radical opposition to nuclear rearmament, to strategies of global containment, and to the whole complex of imperialist military alliances and arms-export client regimes. Yet this duty of all socialists must be distinguished from naive or false-naive positions in the matter of the central nuclear-weapons confrontation. There are duties of defence of the international working class, but these necessarily include the whole working class, in each of the systems and beyond them, and cannot be discharged by deliberate or as it were accidental projection to the interests of a single state military order. The second available position is more complex, but more adequate. It begins from the fact that it has been primarily the long pressures of imperialism against the new socialist and national-liberation states that have distorted, often disastrously, the realization of revolutionary socialism and democracy. From such a position it is possible both to recognize and struggle to end the crimes of imperialism and at the same time look full in the face the consequences, within the revolutionary states, new and old, of prolonged militarization and a state of political siege. Nor is this some neutralist position. It is centrally in the interests of socialism itself that these dangerous and objectively anti-socialist conditions should be diminished and finally abolished. Thus initiatives for disarmament must be primarily directed to the inseparable processes of weakening the imperialist offensive and strengthening the forces of socialism against those formations which now distort it. This requires, in the matter of proposals, the most scrupulous attention to real popular interests, rather than to any existing state interests. There is then an overwhelming socialist interest in nuclear disarmament, since the missile-nuclear systems objectively strengthen bloc politics, hegemonism and centralized military-security state apparatuses. This emphasis can be the particular merit of the emerging campaign for European nuclear disarmament. Committed, as it must be, to East–West reciprocity, to the steady enlargement of demilitarized zones through the various layers of weapons sytems, and then to the necessary gaining of some real political space in Europe; it is the only campaign which is entirely congruent with the long-term interests of all European socialists. It will remain very difficult to keep the emphases right, not only against misrepresentation and opposition, but between ourselves. Real responses will be required from within the Soviet alliance, and these are more likely to come if we make it clear that our disarmament proposals are integral with renewed efforts to advance socialism within our own countries; that they involve significant and difficult breaks with the strategy and ideology of the imperialist and anti-communist alliance; and, crucially, that the condition of success of any of these struggles is a serious reciprocity, allowing the development of movements of national-popular support, rather than any simple taking of advantage of peace campaigns. It would be a very serious misreading of our campaign by anyone in the East to conclude that it is manipulable in the interests of bloc-politics and military advantage. But then it would be also a serious misdirection of our campaign if it became, at any point, in fact or by default, manipulable. The Necessary Linkages To support the Campaign for European Nuclear Disarmament does not necessarily mean believing that the central fracture and confrontation is in Europe. The most dangerous nuclear arena is here, but the crucial political struggles and dangers are very much more widespread. Thus the socialist contribution to the politics of nuclear disarmament must be more than simply collaborative, and must include solidarity with Third World struggles against an imperialist economic system which globally reproduces hunger and exploitation. This is no matter of riding the peace campaigns for some partisan objectives. There is now a profound linkage between the most actual and recurrent dangers of war and the specific crises of the imperialist world system. The use of military force and intimidation to maintain systems of power and exploitation—over and above the systems of military-strategic deployment—is still the central threat to peace. If we are to understand and explain this fully, we have to move on from the known and still crucial facts of the international economic order, to the now rapidly emerging facts of the crisis of resources. It has become an absolute duty for Western socialists to prepare, in good time, the positions from which we can oppose and defeat attempts to secure scarce resources—the case of oil is the most urgent current example—by military interventions, whether direct or indirect. Such interventions will of course attempt to recruit popular opinion by appeals for the protection of our (privileged) ‘way of life’. Given the effects of the simultaneous crisis of imposed unemployment and deprivation on the working peoples of the West, no socialist can suppose that these attempts will be easy to defeat. But there is no contradiction between such work and campaigns for nuclear disarmament. Indeed unless such campaigns are developed, in practical and predictive ways, the more isolated peace campaigns could be simply overwhelmed. Such considerations are also relevant to what is now the major problem of the traditional linkage between opposition to rearmament and opposition to unemployment and social deprivation. There are still real links between essentially wasteful military spending and poverty and deprivation in the rest of the social order. But here, as elsewhere, there is not going to be any simple return to the status quo ante. We may have to face the old problem of a reactionary connection between rearmament and the revival of employment. But beyond this there are new and quite major problems of change, if both peace and decent living standards are to be maintained in the old capitalist world. It is not just a matter of cancelling useless or obscene military expenditure, nor even of redirecting investment to alternative civilian manufacture. The changes will have to involve radical transformations, internally and externally, rather than simple cancellations or reversions. Despite the difficulties of such transformations, they must be central priorities within any agenda of working for peace.

#### Growth’s sustainable.

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Threatening reports about our ability to create disasters and even exterminate ourselves are not a new idea. A standard example is the British national economist Thomas Malthus in the early 19th century, who predicted that population growth would come to a halt because of starvation. Malthus calculated that the available food in the world couldn’t feed more than one billion people. He extrapolated the development from a still picture of his own time and couldn’t fathom that food production would increase tremendously thanks to new knowledge and technology. Our present food production is sufficient for seven times as many. Malthus didn’t pay attention to the fact that we live in a continuously changing civilisation, and the same kind of miscalculations are still made today. There are people who have even achieved the status of media superstars by presenting various dystopias and catastrophe scenarios. As early as 1968, Professor Paul Erlichs at Stanford University published the bestseller The Population Bomb, where he predicted that an imminent population explosion would result in hundreds of millions of deaths by starvation in the 1970s and 80s. Basically, he made the same mistake as Malthus, i.e. he treated knowledge and technology as if they were static phenomena. The most widely read environment report in the world, State of the World, was a loud whistle-blower when it was first published in the early 1980s. The Swedish version, Tillståndet i världen, was published yearly from 1984 and some years into the 2000s by the Worldwatch Institute Norden; I still have some of the early issues left. This report contains many valuable observations and suggestions, but also several basic analytical mistakes. In other words, it acts as an eye-opener, but it suffers from being tainted by political ideology. Its main weakness is that it doesn’t take the intrinsic driving forces of progress into account. State of the World was translated into most major languages and is, as already mentioned, the world’s most widely read environmental report. It has affected us all, directly or indirectly, through school and media. Even if the Swedish version I refer to was written some years ago, it is still worthy of discussion, firstly because it maintains an appearance of scientific validity, and secondly because it has served as a trendsetter for the general ideology which has been adopted by many later books and reports on the subject at hand. It still lives on as an engraved pattern in our conception of the world. In the report we can, for instance, read the following: A world where human desires and needs are fulfilled without the destruction of natural systems demands an entirely new economic order, founded on the insight that a high consumption level, population growth, and poverty are the powers behind the devastation of the environment. The rich have to reduce their consumption of resources so that the poor can increase their standard of living. The global economy simply works against the attempts to reduce poverty and protect the environment. We stubbornly insist to regard economic growth as synonymous with development, even though it makes the poor even poorer. Even if we up to this point have mainly described the environment revolution in economic terms, it is, in its most fundamental meaning, a social revolution: to change our values. Massive threat scenarios are still presented, for instance in the British scientist Tim Jackson’s book Prosperity Without Growth from 2009, which is one of the most widely read and frequently quoted works in this area. Tim Jackson, who is an economist and professor in sustainable development, explains how we humans are indulging in a ruthless pursuit of new-fangled gadgets in a consumption society running at full speed towards its doom. He also claims that material things in themselves cannot help us to flourish; on the contrary, they may even restrain our welfare. In other words, we cannot build our hopes that the economy, technology or science can help us to escape from the trap of Anthropocene, which has brought us to the brink of an ecological disaster. There are hundreds on books on this theme, and they all agree that the general state of the world is pure misery; everything is getting worse, the resources are being depleted, and that man will soon have destroyed the entire planet. The apparent reason for this, of course, is due to the consumption culture and the present financial system—which exposes man as a greedy, ruthless and ultimately weak creature. This attitude may serve a purpose as an eye-opener. But it is not very credible, and it may even be counterproductive. Of course, we can see a lot of problems ahead of us; but to solve them, we need the correct diagnostics instead of dubious doomsday prophesies. Focus: The Problem Since the focus of attention is so profoundly fixated on the problems in the climate and environmental debate, the progress already made—and the opportunities at hand—are often overshadowed. The example below will help to illustrate this point: In the year 2014, the Nobel Prize in physics was awarded to three scientists who had invented blue light emitting diodes—a technology that has made high-bright and energy-efficient LED lighting possible. As lighting accounts for 20% of the world’s total electrical consumption, this invention has the potential to radically reduce energy consumption and greenhouse gas emissions. In an interview made by the major Swedish daily newspaper Dagens Nyheter, one of the prize winners, Hiroshi Amano, says the following about energy-efficient, inexpensive and high-bright LED lights: “They are now being used all over the world. Even children in the developing countries can use this lighting to read books and study in the evenings. This makes me very very happy”. Shortly after this announcement, the news headlines declared that LED lighting was a threat to the environment. This statement was based on a report showing that LED lighting could be hazardous to flies and moths, which in turn might disturb the eco system. This is a typical example of how progress pessimists and, not least the media, think and act. In this case, they focused on a potential problem associated with LED lighting, and ignored the tremendous possibilities that the new technology offered to dramatically reduce greenhouse gases and thus spare the eco system (not to mention all the other advantages). Books and reports of the kind mentioned above tell us repeatedly about disasters, threats, problems, collapses and famines. On the other hand, they are notoriously silent about the great improvements actually made—the reduction of extreme poverty (not only as a percentage but also in absolute numbers), longer lifespans, dramatic global progress in education and healthcare, etc. The lack of positive media coverage on the environment means that many people believe that too little is being done, which is quite understandable considering the one-sided nature of the information they are presented with. Alarmist reporting almost always reminds me of pirates: they are unreliable and half their vision is blocked by their eye patches. It is vital that the media not only one-sidedly focus on the misery without presenting the progress made and suggesting constructive courses of action. The quality of our decisions in all respects depends on our knowledge, insight and attitude. Real and Imagined Threats Many people are convinced that the climate and environmental problems are growing. It is certainly true that our planet has its limitations, but many of the predictions from alarmist literature have been proven false. In the 1980s, the forest dieback was a frequently discussed subject. To quote the well-known German news magazine Der Spiegel, an “ecological Hiroshima” was imminent. Most experts at the time claimed that a wide-spread forest death seemed unavoidable. Additionally, the general mood of impending doom was augmented by the threat of a nuclear disaster during the cold war. I remember the pessimistic discussions among friends and how frequently the gloomy reports appeared in Swedish and Finnish television. The future of humankind appeared to be depressingly bleak. But the forest dieback never happened. On the contrary, the forest area has been constantly expanding in Europe, even during the entire period when the forest was believed to be dying. Today, only two thirds of the yearly accretion in Europe are cut down, according to the Natural Resource Institute in Finland. There are different opinions as to why the large-scale forest dieback didn’t occur. One theory is that the researchers’ evidence and conclusions had been incomplete and too hasty; the forest was actually never in danger. Others suggest that the emission limitations implemented prevented the disaster. My point is that the environmental catastrophe did not happen. Some other environmental problems, exaggerated or not, that have concerned us during the last decades have also disappeared from the immediate agenda: overpopulation, DDT, the ozone hole, heavy metals, lead poisoning, soot particles, the waste mountain, and the acidification of our lakes. Unfortunately, some environmental problems, like soot particles and waste, still remain in some areas, especially in poorer countries, where there are other, even worse problems that have yet to be resolved. The conclusion is, however, that we and our society in most cases have handled threatening situations quite well. When alarming symptoms are noted, scientists and other experts are summoned, and we act according to their diagnoses. It is no big deal that the diagnoses are sometimes wrong, as long as the side effects are not too severe. The main thing is that we do our best to avoid disasters, and on the whole, humankind has succeeded rather well this far. As individuals, we react very differently to various kinds of threats. The closer and more tangible the threat is, the more violent are the reactions—while distant and invisible symptoms, like the depletion of the ozone layer, concern us less. In the latter cases, we have to trust the scientists’ and later the politicians’ reactions. Does this mean that disasters are avoided thanks to war headlines, threats, and anxiety? I don’t think that this is the most important explanation; rather, it is factual and science-based information that produces effective results. But if exaggerated threat scenarios and reports of misery are needed to inspire the necessary political opinion, acquire research funding and create behavioural changes, we will have to live with that. The most important thing to remember in this context is that the actions shouldn’t cause more harm than the original problem itself. The risk with exaggerated threat and misery reporting is that it may inspire an over-reaction based on misleading diagnoses, or the opposite—a paralysing feeling of helplessness. It is necessary to take threats against the climate and the environment seriously, but not to a degree where our ability to reason and act is blocked by fear or anxiety. Many environmental debaters claim that the fall of the Inca and Roman empires were caused by the same causes that are now threatening our present civilisation—a short-sighted over-exploitation and rape of nature. Easter Island is another popular example. However, in my opinion it is both worthless and irresponsible to judge the world situation of today by copying the outcome of earlier cultural endeavours in history. The inhabitants of the Inca empire and Easter Island didn’t have anything even remotely comparable with the organisations, technology, medicine or general knowledge of today. It would be like comparing a case of appendicitis in the past to a case today. In pre-modern times, it was a fatal condition. In this day and age, it is cured by a simple routine operation. Today, humankind is conscious of the climate changes and other ecological challenges. And we also have the knowledge and resources needed to act. Facts, Propaganda and Hidden Messages During all the years I have followed the development of technology and society, I have repeatedly observed how a mishmash of serious research, political propaganda, and the hidden agendas of individuals have been distributed more or less randomly by the media. There are of course many different kinds of alarmism— everything from well-founded research reports to exaggerated prophesies of doom. It is far from simple to separate the wheat from the chaff. The actions taken against ozone depletion, lead emissions and the toxic chemical, dioxin, are all examples of how research has shown the way to successful results. Today, greenhouse gas emissions top the list of issues deserving our gravest attention, as it is a global phenomenon—just as the depletion of the ozone layer once was. There are also a considerable number of local environmental problems, such as drought, air pollution, forest depletion and overfishing. All of these are real threats that have to be acted upon, even though they are not global. However, I am always disturbed when a single global environmental issue is bundled with an assortment of several local issues, rather like a simplified trademark advertisement for the negative consequences of civilisation. This makes the information abstract and inaccurate, ignoring the fact that different locales require different solutions. Fear and alarmism are natural reactions that once protected us when we were living at the mercy of nature—they are evolutionary relics from our life in the savanna. Today, the same properties can be significant drawbacks. The transition from a primitive, animal-like state to the society we have today must, on the whole, be counted as a great success. But many people regard the same world as over-exploited, depleted, unjust, war-ridden and balancing on the brink of destruction. How can people living in the same epoch have so entirely different views of the world? In the sustainability debate, there is one faction dealing with the natural resources and ecosystems, and another focusing on the redistribution of wealth. There is even a third faction discussing a minimalistic lifestyle; for example, downshifting, with less work and less material welfare. When all these ingredients are mixed without discretion, the result is an anxiety soup that many have choked on. In a situation like that, we cannot expect any constructive initiatives to materialise. Instead, it would be far better to explore, research and discuss each dimension separately. What Is the Real State of the Planet? It is easy to generalise and say that we over-exploit the planet’s resources and pollute the world with our waste. But how many care to examine these statements in detail and ask exactly which resources are over-exploited? • Are fish becoming extinct? It is true that overfishing occurs in many places, which is, of course, unsustainable. However, this is not an unavoidable threat to the world’s total food resources. Fortunately, there are several examples of fish stocks that have either recovered or started to replenish once the fishing effort has been eased. • Is the air being poisoned? Many are convinced that the air we breathe is becoming dirtier all the time. But that isn’t true, at least not in the Western world. From the year 1990, emissions of sulphur dioxide have been reduced by 80%, nitrogen oxides by 44%, volatile organic substances by 55%, and carbon monoxide by 62%. Despite these dramatic improvements, 64% of Europeans believe that pollution is increasing. • Are the forests dying? It is a general belief that the forests in the developed countries are dwindling. But that isn’t true; on the contrary, the wooded areas are expanding. However, the forests are decreasing in the poor countries, where forestry and farming are still major sources of income, as they once were in the industrialised countries. • Are we drowning in waste? There are many who believe that we are surrounded by constantly growing mountains of waste. In the developed countries, the truth is that increasing amounts of waste are being recycled and the landfills are decreasing. • Will there be enough phosphorus? Phosphorus is an important nutrient in farming, extracted from phosphate ore. Many scientists fear that the finite natural resource of phosphate ore will become depleted in the future, which may jeopardise the world’s food supply. But there are already working solutions f

or this problem, such as by reclaiming phosphorus through digestion residues and sewage sludge. There are also technological solutions for the chemical extraction of phosphorus from polluted water—the remediation of lakes and rainwater by removing phosphorus is already a common procedure. Here we achieve a win-win situation—phosphorus is collected while preventing the eutrophication of lakes. • Will there be enough energy to go around? A common statement is that the earth’s population is too large, and that we consume too much energy with respect to the climate. This is one of those issues where we have to think in terms of symptoms, diagnoses, and medication. The symptoms are there for all to see: climate change. On the other hand, the diagnosis that we consume too much energy is wrong. The correct diagnosis is that we are not using the right technology; i.e. energy efficient power production without harmful emissions. Consequently, the correct statement would be that we consume energy that is produced by technologies that are harmful to the climate. The difference in wording is important. As the first diagnosis is “too high energy consumption”, the remedy will be to use a different medication than a diagnosis based on “the wrong technology”. Alarmist reporting can inspire bad decisions if the statements aren’t systematically reviewed and evaluated. It can also be misguiding to express environmental threats in general terms. Actions must be based on precise specific symptoms with corresponding diagnoses. If the doctor discovers that the patient is lame and suffers from a high fever, it doesn’t help to predict imminent death. Maybe the lameness and the fever have different causes altogether! A successful cure would probably include two different diagnoses with separate medications. Several recent surveys of the general conception of the world have been made— one is Project Ignorance by Gapminder and Novus in Sweden. One of the questions asked was whether CO2 emissions per capita and year had increased or decreased in the world during the last 40 years. The surveyed group was large and representative in order to give a fairly accurate picture of the common opinion. No less than 90% believed that CO2 emissions had increased. The truth is that they haven’t increased at all. It is important that decision makers on all levels learn how to see the wood from the trees. Decisions based on false preconditions can halt technological development, and thus also the development of the economy, welfare, and a healthier environment. The flow of innovations in the climate and environmental areas is accelerating rapidly. This can be seen in the number of improvements that have occurred in recent years, which can be counted in the thousands. Such improvements have to be weighted on the same scale as the problems in this area. That is not to say the problems should be ignored—they need to be acted upon. But they should not be allowed to occupy our brains to the extent that our power to act is paralysed. Is the Notion of Sustainable Technology-Driven Growth Over-Optimistic? The development of a technological society has always been questioned. In the 19th century, critics claimed that the technological revolution would create poverty. In the 1970s, it was generally believed that the forest dieback would cause a disaster. In the 1980s, the acidification of lakes and throwaway mentality of society were regarded as manifestations of the devastating properties of growth and industrialisation. Today, many fear the environmental effects of air travel and the production of electronic devices. There are people who seriously wish to halt economic growth and wind back the clock to the society of the 1960s. They recall this time period as small-scaled and down-to-earth, stress-free and idyllic. But they tend to forget that the refrigerators of that time required 90% more electricity than today, and that our teeth were repaired with mercury fillings instead of plastic. There were no X-ray CT scanners and no medicines against ulcers. In addition, there were many more people living without electricity. There was also more widespread malnutrition, a higher infant mortality, and, in fact, more wars. Cars were fuelled by leaded petrol, and sulphur emissions were 90% higher than today. The acidification of lakes, as well as polluted streams and fields, were serious concerns. Since then, technological innovations have reduced sulphur emissions and removed the lead from car fuel. At any given point in history, there have been critics claiming that this was the time when we had reached the optimal point in the development of the modern society. But we hadn’t, not then and not now. And the more our countries are modernised, the greater our possibilities to care for animals and nature become. In the mid-1800s, the killing of large animals like sperm whales didn’t concern people to any significant degree, despite the cruel hunting methods using harpoons. The benefits of the whale fat, mainly used for lamp oil to facilitate reading in the evenings, overshadowed any empathic impulses. In the 1850s more than 70,000 people were employed by the American whaling industry. There were 900 ships in the world hunting whales, and during one of the most active years, 8000 whales were butchered, which provided more than 300,000 barrels of oil. The oil extracted from the head of the sperm whale, the so-called spermaceti oil, was especially sought-after. It was of very high quality and sold for 1.50 US dollars per litre in today’s monetary value. As a consequence, the number of sperm whales in the world rapidly dwindled. However, when oil drilling started in Pennsylvania in the year 1859, the price of whale oil began to fall. The fast transition to petroleum products for lighting and other applications is considered to have saved the last of the sperm whales. Thus, new technology can both contribute to the protection of threatened animal species and provide the wealth to make it affordable for us to even save predators. Imagine what would happen if we were able to bring back someone from the 19th century and tell them that today we move wolves though the air by helicopter in order to save the species and expand its habitat; our ancestor would probably rather go back to sleep than listen to such apparent stupidity. Pessimism Does not Support a Sustainable Development There is a lot of progress going on in the world today, but not without negative side effects. When improving the world and dealing with the side effects, an optimistic attitude provides us with a much better chance of success than a pessimistic view. The optimist carries a positive inner beacon to follow, while the pessimist is always looking for potential traps and drawbacks. As visions and conceptions of ideas often become self-fulfilling, it isn’t difficult to realise what’s most constructive. All decisions—big or small, conscious or not—are affected and guided by our inner beacon. When solving a problem, such as developing a new product for example, it is necessary to have a conception of a working solution in mind. As a product developer, it is of course necessary to review every minute step in the process and question the choices made. You have to ask yourself if there may be a better material or a smarter design. Strange as it seems, this continuous struggle in the mind of the developer may appear to be a kind of pessimism, as it is all about looking for weaknesses in the imagined solution. It is not dissimilar from the process a doctor follows when selecting a diagnosis and a remedy. You start with certain hypotheses, examine, exclude, test, question and verify until you are satisfied that you have made the correct diagnosis. Then the choice of medication becomes much simpler. It would be fatal if the doctor was pessimistic from the start and worked in the belief that it would be impossible to find a reason for the illness, or a working remedy. This could then be the conclusion that such a doctor would unconsciously try to verify. Would you like to have a doctor like that? The same is true for climate and environmental problems—we need optimists armed with critical thinking to solve them. There are also so-called climate change deniers, who believe that man hasn’t really affected the planet and its ecosystems to any significant degree. Some of them claim that the influence of the sun and other natural phenomena are so enormous that human activities have no bearing on global warming. Perhaps these deniers are so deeply pessimistic that they cannot imagine any possible solutions. For ages, man has harboured a certain distrust of his own species. Throughout history, various religions have emphasised human shortcomings and presented assorted consequential threats. During the last 30 years, such prophesies have increasingly often been introduced by environmental activists and some political groups, whose messages have been significantly supported by the media. The underlying conception of humanity isn’t flattering. The human race is considered to be fundamentally ruthless, greedy, short-sighted and evil. Threats against the climate and much other misery on earth are caused by human failure. However, if we take the time to study the progress that has been made by the human race throughout the ages, we actually get the opposite picture. Can it really be evil, greedy, and short-sighted beings who put their own lives at stake to treat people infected by Ebola or HIV in poor countries? Who are the ones that are continuously reducing the number of starving people on earth? Who are the ones that invent vaccines for the children of the world? Who are the ones that have developed a civilisation where an increasing number of people get educated, and who struggle to reduce the casualties of war? Why blame an entire species for atrocities that are actually committed by a mere fraction? Establishing a firm belief in humankind should be the first step on the road to sustainable development.

# 1AR

#### Growth’s sustainable---only getting off the treadmill causes extinction

Rasmus**Karlsson 16**, Associate Professor in political science at Umeå University, “The Environmental Risks of Incomplete Globalisation”  DOI: 10.1080/14747731.2016.1216820

Clearly, as much as energy saving and other forms of demand-side management in the rich countries may make sense within their respective domestic contexts, such measures have the unfortunate effect of reducing the political interest in financing the kind of supply-side revolution that is needed globally. Third and finally, as it is becoming increasingly clear that the politically agreed target of keeping global warming below two degrees Celsius will not be met by conventional mitigation alone, there will most likely be a significant need for energy for carbon dioxide removal (CDR) but also for adaptation in terms of for instance mass desalination for agricultural purposes, further underscoring the inadequacies of the current soft energy approach. An alternative and very different approach to climate nationalism would be to ask, what kind of technologies would be required to achieve climate stability in a world of 10+ billion people living prosperous lives? Starting from that question and working backwards such an alternative approach would shift the focus from the immediate deployment of non-scalable technologies to the innovation of massively scalable high-energy technologies capable of providing an abundant and cheap supply of clean baseload electricity (Galiana & Green, 2010). The underlying premise would be that by making clean energy significantly cheaper than today it would be possible to rapidly displace fossil fuels and effectively overcome political and cultural inertia. No longer economically competitive, existing fossil infrastructure would then be abandoned as stranded assets, even in those countries that for political reasons may doubt the seriousness of climate change **or those where fossil industries may hold a strong political influence**. Most importantly, such an approach would give developing countries the reliable 7 **energy they need to move away from fossil fuels at the same time as they can universalise access to modern energy services**. Currently, indoor air pollution from the burning of wood and charcoal causes millions of premature deaths annually while simultaneously driving deforestation. Given its inherent merits, not the least its potential to once and for all resolve long running North-South tensions in international environmental debates (Williams, 2005), it may perhaps seem strange that such an advanced technological path to climate stability has not been widely considered in the literature (Dorr, 2016; Green, 2015; Symons & Karlsson, 2015). There are of course many reasons for this, in particular the fact that since the most obvious such “high-energy” technology would be nuclear power, it would mean moving into a minefield of political risk. Despite more than sixty years of civilian nuclear power with extremely few fatalities compared to fossil energy (it is for instance worth noting that no one has yet died from radiation after the Fukushima accident in 2011), public perception of the risk of nuclear energy has been unforgiving. Given that there seems to be no hope for a rational discussion on the risks of nuclear compared to those of uncontrollable climate change, it may matter surprisingly little to know that if all of the world were to build nuclear power at the same per capita rate that Sweden and France did during the 1970’s and 1980’s, then coal- and gas-fired electricity could be replaced worldwide within a few decades or less (Qvist & Brook, 2015). However, in addition to other concerns such as proliferation (Socolow & Glaser, 2009), existing nuclear designs are highly brittle in the sense that one single major accident could potentially mean an end to expansion plans everywhere. Given the limited remaining carbon budget if catastrophic climate change is to be avoided, such fragility is obviously a strong argument against making a global mitigation strategy dependent on existing nuclear designs. Accepting that puts the focus back on fundamental energy R&D. While nuclear technologies broadly conceived are likely to play an important part in any high-energy future, finding an energy source which is proliferation-resistant, passive safe, and which has an abundant supply of fuel that would allow it to generate baseload electricity at a cost far below fossil sources will require nothing short of an energy miracle. When Darrel Moellendorf writes that hoping for such a technological breakthrough “hardly amounts to a basis for responsible policy” (Moellendorf, 2014:183) he gives voice to a commonsensical view which is widely shared in the climate policy community. Obviously, 8 committing vast social resources to fundamentally uncertain research makes little sense if there is a meaningful alternative. Yet, after more than two decades marked by an ever more polarised climate debate (Keller, 2015:223), it should be obvious that current mitigation efforts are failing (Jamieson, 2014). Even if the progressive offshoring of carbon-intensive industries may have helped in improving the carbon inventories of certain rich countries, overall emissions (in particular when including aviation and shipping) have steadily gone up since the inception of the Kyoto Protocol. The prospect of brute force mitigation through directly reduced consumption rates, as envisioned by many Greens and theorists alike (Harris, 2010),seem as remote as ever. Contrary to the hopes of Greenpeace and other environmental NGOs, Germany, which has taken on itself to lead the world into a future of renewable energy, has seen rising carbon emissions for several years following the phase-out of nuclear energy. At a global level, the share of coal power in the world’s energy mix has not been higher since the 1970’s and the overall share of carbon fuels in the total energy consumption has remained more or less stable around 86-87% since 2000 (BP, 2015). Over time however it is likely that the very richest countries, which have sufficient numbers of affluent consumers who can afford to pay higher energy prices, will be able to complete the shift to small-scale renewable energy sources, especially if much of their overall physical infrastructure is produced elsewhere and the intermittency problem can be solved through energy storage (and not as today by fossil backup capacity). Yet, simple back-of-the-envelope calculations show that providing the several thousand exajoules of clean energy annually that would be needed for a global economic convergence is more or less impossible using such technologies (Trainer, 2013). That is one of the reasons why almost all climate scenarios that succeed in stabilising the climate over the course of the 21st century do so by inserting austere assumptions with regard to energy access and, thus, overall energy demand (Pielke, Wigley, & Green, 2008). In less technical language, such restrictions essentially mean that that the poor stay poor deep into the future. Considering this, the connection between climate nationalist thinking and the current state of incomplete globalisation becomes readily visible. According to the standard Malthusian narrative, technology can never “keep up with growth in population, affluence, and consumption” (Mitchell, 2012:25). As a consequence, the only hope of achieving climate stability hinges on constraining population growth and overall human welfare. Despite its dubious ethical implications, such an argument would perhaps 9 make sense if fairly marginal reductions in growth rates would be sufficient to achieve longterm sustainability. Yet, given how **deeply unsustainable** the very metabolism of modern industrial society is, **this is obviously not the case**. In a world of 7.3 billion people, **the reductions in economic activity would have to be of an almost apocalyptic magnitude** to bring down per capita emissions levels so that they would be lower than what is absorbed by natural sequestration processes. Given the political impossibility of achieving such dramatic reductions in the rich countries, it is not surprising that the political attention has shifted to the task of keeping poor people away from fossil forms of development, something which in fact has already become the explicit goal of many environmental NGOs but also a kind of “carbon conditionality” imposed by for instance the U.S. Agency for International Development’s “Power Africa” initiative. While much can be said about the morality of imposing such double standards at home and abroad respectively, the most apparent implication of this is that the poor will in effect stay poor. Even if distributed solar panels may be sufficient for charging a cell phone or powering a reading lamp at night, the energy provided is of a completely different scale compared to what was needed for the sweeping modernisation processes that made broadly shared prosperity possible in Europe, North America and, most recently, North-East Asia. Psychologically unrealistic as it may be to expect the poor to remain content with being locked out from modernity in this way, the current state of incomplete globalisation is likely to frustrate or at least delay their rise. While this may ostensibly win some time in terms of lower carbon emissions, it will also have many countervailing effects such as delaying the demographic transition that would follow from more comprehensive forms of modernisation or prolong the use of informal fuels. Failure to fully integrate the world will also have another important effect for the transition to sustainability, namely to slow overall global growth rates. While it is fashionable in more critical literature to suggest that the marginal utility of further economic growth has become negative in the advanced economies (Jackson, 2011), this is to grossly misunderstand contemporary economic and political dynamics. Not only is further economic growth indispensable to ensure the financial stability of retirement schemes and to pay the health costs associated with an ageing population, it is in fact the very life elixir of society as it lessens distributional conflicts and encourages public risk-taking (Friedman, 2006). Only in a situation of strong economic growth are politicians likely to make the bold 10 investments in energy R&D needed to bring about the kind of “**high-energy miracle**” discussed above. As a consequence, it is possible to see an indirect link between failure to integrate the world and the prospects of financing breakthrough innovation. Yet, beyond this indirect link, there is a much more direct link in terms of the costs of violent conflict caused by global inequality, the policing of borders, and the risks of pandemics (as most recently seen in the case of Ebola in West Africa), all diverting resources away from more urgent social needs, including energy R&D. To build a world unafraid of itself Even if analytic political philosophy may not have shown much recent enthusiasm for nationalism or other forms of metaethical particularism (Caney, 2005), the world of today is still one in which life opportunities remain largely determined by a completely randomly assigned variable (place of birth) rather than individual ambition and character. Not only does this “citizenship premium” (Milanovic, 2013) create migratory pressure and fuel resentment, it also means that billions of people never get a chance to develop their full intellectual potential and, with it, their economic productivity. Despite that many of the great hopes of the Enlightenment have been fulfilled over the last centuries, it has now become common to distrust the very possibility of social progress and to doubt that humanity can ultimately build a world unafraid of itself (Bronner, 2004). Without subscribing to teleology (Wendt, 2003) there are many reasons to think that, despite the recent rhetoric of Donald Trump or other signs of backsliding, much greater optimism is in fact warranted. Not only has there been **no new wave of protectionism**in the wake of the financial crisis (as was the case after the crash in 1929) but the World Value Survey and other similar studies have consistently shown a movement away from traditional values and hierarchical forms of authority towards secular-rational values, greater individual freedom, and autonomy (Welzel, 2013:143). Every year, more and more people travel by airplane and are able to experience other countries and cultures first-hand. As the world gets smaller, it is becoming increasingly difficult to deny our common humanity and insist on the artificial segregation of people based on mere geographical luck. Yet, in terms of politics or ideology, there has been surprisingly little interest in even imagining a world with universal freedom of movement and shared prosperity. It is reasonable to think that this disinterest in part derives from deeply entrenched Malthusian beliefs and fears of a coming climate crisis. 11 Malthusian discourse often portrays global climate change as ultimate evidence of irresponsibility, greed or even the “cancer stage of capitalism” (Barry, 2012:138). Such descriptions show little tolerance for learning or humility with regard to the difficulties of the task. There has never been a blueprint for how to build a prosperous planetary civilisation or for how to achieve technological maturity in a way that does not destroy the biosphere. Yet, in a world of **seven billion** actually **existing people**, the question is where to go from here? As discussed above, to try to reverse the great structural processes of modernity through intentional localisation **does not only seem wholly politically unrealistic, it is also most unlikely to actually deliver greater resilience or environmental sustainability**. Yet, the problem of lacking realism is just as acute for those advocating breakthrough innovation or seeking to more fully integrate the world (Karlsson, 2013). In a time of public austerity, rising xenophobia, and an almost complete absence of realistic yet transformative visions at the global level, it is not surprising that climate nationalist responses have emerged as the default policy orientation. While these responses may at best slow the rate of warming, they offer little hope for the 3.5 billion people who currently lack access to modern energy and, as such, they are likely to contribute to the creation of new patterns of climate injustice. They are also problematic in the sense that for every year that a more meaningful response is delayed, the need for CDR grows. Already now, such negative emissions technology has become more or less a necessity for achieving the two degree target according to the scenarios represented in the Intergovernmental Panel on Climate Change (IPCC) database (Anderson, 2015). Whereas breakthrough energy innovation could potentially offer a source of sustained global growth as energy would become significantly cheaper, CDR is always going to come at a net cost. If CDR eventually becomes unaffordable due to prolonged political procrastination and generally inefficient mitigation policies, it is likely that the political momentum will shift towards solar radiation management (SRM) and other more risky forms of climate engineering. Instead of fearfully backing into a warming future, there is an obvious need for bold and **proactive political action** (Garibaldi, 2014; Karlsson, 2016). Yet, as long as mitigation is perceived as a cost and something that runs counter to broader socio-economic goals, such action is unlikely. While accelerating the transition to a high-energy planet would undoubtedly put strong upward pressure on global emissions in the short run, it would also open up a political opportunity space for effective climate action that does not exist today. In a more 12 equal and integrated world, there would be greater financial and human resources to combat climate change. Most of all, by providing a progressive account of globalisation, there would be a meaningful counter-narrative to both nationalist and neoliberal thinking. F

#### Their fatalism is wrong---the consensus of scientists is that innovation will overcome constraints

**Kelly 13** – Cambridge engineering professor (Michael, “Why a collapse of global civilization will be avoided: a comment on Ehrlich & Ehrlich”, July, <http://rspb.royalsocietypublishing.org/content/280/1767/20131193.short#corresp-1>, ldg)

The population explosion (and its Malthusian societal disruptions) that Ehrlich FRS predicted for the 1990s has not come about [5,6], and the concerns in this present Ehrlich paper are not tempered by the mounting evidence of the demographic transition that occurs when the majority of people live in cities and have access to education. In Japan, Europe and North America the population, excluding immigration, is in decline. Some studies indicate that a peak of 9 billion people in 2050 will be followed by a decline to a population of approximately 6 billion in 2100—less than that in 2000 [7] and bringing new problems of unwanted infrastructure assets! The UN is revising its future population estimates downward [8]. If we look at the waste in the contemporary food chain, at the point of growth, in transit to the market and into the homes of consumers, and compound that loss by the amount of food thrown out rather than consumed, **we generate the quantity of food to feed the 9 billion today with the systems in place if we were less wasteful** and could distribute it [9]. Animal protein is now being generated in the laboratory and not on the farm [10]. Where is the discussion of the impact of mega-cities being self-sufficient in animal protein from factories within their city boundaries 40 years from now? This is the time scale on which synthetic fibre comprehensively displaced wool from most of its markets. Indeed, rather than speak of peak oil, we can speak of peak farmland—we will need smaller areas in future to feed the world, and we will oversee the managed return of excess land to the wild [11]. The starkest example in the consideration of material overconsumption is the smart phone [12]. This was developed within the paradigm of business as usual to improve the way in which we communicate. Two points are relevant. First, the small piece of metal, plastic and semiconductor that fits in the palm of a hand contains the functions of a camera, radio, telephone, answering machine, photo album, dictaphone, music centre, satellite navigation system, video camera and player, compass, stop-watch, Filofax, diary and more, which were all separate and bulky items only 20 years ago. **This represents the great dematerialization of modern civilization, well ahead of any imminent collapse of natural resources**. The shape of high streets and retail centres are changing to reflect this evolution. Indeed, the recycling of electronic systems will enhance further this capability of doing **more with less** material, and the market for extended time between recharging has driven extraordinary improvements in energy efficiency. It is these new low-resource technologies with ever-increasing recycled materials that will drive the world in future. Second, the mobile phone is being used in rural Africa and India to inform farmers of optimal times for taking their products to market, thus reducing greatly the loss of product and/or income, and reducing the stress on land from the need to overproduce to compensate for such losses [13]. Peak planet is now the new research topic [14]. Any perceived threat to the security of the energy supply from finite resources over the last 200 years has been met by a deeper search for reserves. Hansen et al. [15], and especially their fig. 6, show just how little (approx. 10%) of the known and accessible fossil fuel reserves (both conventional and unconventional) has been consumed, and we have had 40 years of future energy reserves to hand for some time [16]. We have not stopped looking for more, as with the recent discoveries of huge fields of methyl hydrates. In future, when we leave the fossil fuel age, it will not be because of the exhaustion of fossil fuels, **but because a cheaper, cleaner and more convenient alternative technology emerges, and we have ample time, probably 100 years, to get there.** Modern climate scientists seem to be fixated on human-produced CO2, and have missed what the Sun [17] and the biosphere [18] have been doing for the last 30 years. If the history of solar behaviour repeats itself and we were to enter another little ice age, every ppm of CO2 in the atmosphere would be a boon as we feed 9 billion people in 2050 compared with the less than 1 billion last time in the seventeenth to eighteenth centuries. The transition out of the Medieval Warm Period into the Little Ice Age harmed but did not collapse global civilization, and we are much better prepared this time. The growing amplitude of the Keeling cycles of CO2 in the atmosphere is evidence of the greening of the biosphere [18]. The present temperature stasis since 1998, if extended by another 5 years, as now suggested [19] at a time of ever-increasing CO2 emissions, implies that both the coupling between CO2 and globally averaged surface temperatures has been exaggerated in the climate models and natural variability has been underestimated. Indeed, Otto et al. [20] have just revised down their estimate of climate sensitivity to atmospheric CO2 to a value that is now half that cited in earlier IPCC reports. Akasofu's [21] projection of the future temperature, made originally in 2000, and based on extending previous climatic cycles without explicit reference to CO2, has been borne out very precisely, and it is more accurate than all the climate model projections put together—furthermore, he makes a projection of lower temperatures until 2030! An over-emphasis on the urgency of mitigation has had a direct societal consequence in the Gadarene rush to reduce fossil fuel consumption. We do have more time to develop proper alternatives to fossil fuels. The current bankruptcies of alternative energy companies are inevitable: their present technology is both immature and uncompetitive. It is an exact repeat of what happened in California in the 1980s in response to the 1970s oil crisis and for the same reasons: without massive subsidy the energy generated did not produce the profits needed to keep up maintenance. (Graphic images of green industrial dereliction can be seen by googling the phrases ‘abandoned solar farms’ and/or ‘abandoned wind farms’.) Two hundred years ago, windmills stopped turning with the advent of steam engines, which were more efficient, needed less maintenance, and provided energy when and where needed. Little has changed in relative terms since! Trends in solar photovoltaics suggest that in 20 years the technology could become absolutely competitive with fossil fuels [22] unless the price of the latter collapses from current high prices just as they did after the 1970s peak. Whatever happens, the total energy from practical and economic solar systems will play a small part in meeting the global energy demand for the foreseeable future: renewable energy sources are intrinsically dilute at source [23]. Energy storage at the large scale is way into the future, except for water for hydroelectricity, as in New Zealand and Norway. Pushing water uphill with alternative energies is woefully inefficient. Communications, new materials and health systems all present humanity with clear opportunities to avoid future problems with tools not available to earlier generations. The Internet, and its implication of all information available everywhere, instantaneously for everyone, will ensure that technical, medical and societal advances will proceed and propagate very rapidly. An advance in one corner of the world will almost instantaneously be accessible and adaptable anywhere. Human travel will change from becoming a necessity to an option, freeing up time, reducing emissions and enhancing business between continents [24]. New ‘designer’ materials and three-dimensional printing technology for manufacture are likely to massively reduce our reliance on depleting natural resources, providing for a far more adaptive approach to materials in applications. The incredible waste we currently produce is likely to reduce very significantly, making for greater resilience against resource depletion [25]. Ehrlich & Ehrlich [1] are concerned about future pandemics in a closely interconnected world. However, advances in medicine and diagnostics will result in significant economic gains in terms of treatment efficacy, in days lost from the workplace and in the ability of mankind to respond to a future pandemic. The recent response to the H5Nn series of bird flu viruses is very encouraging, and the strategies have existed for some time [26]. We can be a much more resilient race in future than we could be in the past. Similarly, with the advances in understanding the brain and President Obama's recent commitment to mapping the brain, we will enhance our cognitive and processing capability so as to further our ingenuity and resilience in response to future threats. **The mainstream scientific and engineering community can see nothing that suggests an imminent collapse of civilization, and it is well on track to deal with new problems as they emerge, in continuity with the history of the last 200 years**. Neo-Malthusians have proved comprehensively wrong so far, and this comment argues that this is set to continue into the foreseeable future. This comment is not denying challenges, but is really questioning defeatism. Weigh the evidence. **Finally, it is only civilizations backed by strong economies that are in a position to do the research and make the necessary scientific, engineering and technological advances to offset environmental threats.** Scientific views that undermine economic progress are a threat in themselves, and need a careful and robust justification before they are widely propagated.