# UT Finals Neg vs Strake JS

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#### I unconditionally defend the status sqo.

### Links

#### They link to Dedev

#### They ensure “positive long term economic growth” – AC Kassab

Hanna Samir **Kassab 17**. Visiting Assistant Professor of Political Science at Northern Michigan University, Prioritization Theory and Defensive Foreign Policy. Springer International Publishing, 2017. CrossRef, doi:10.1007/978-3-319-48018-3. // Re-Cut Justin

Great powers, with all their resources, power and influence, have inherent weaknesses. These weaknesses are all part of today’s international system as defined by complex interdependence, but they also emanate from weak states. Because weak states are so exposed to shock, vulnerabilities have time to ripen and become part of the international structure, thereby having what I call systemic reach. While Structural Realism posits that the system is constructed by states’ distribution of capabilities, I add that other facets of international politics—vulnerabilities—also create the system and the way states interact with each other. The systemic reach of these threats forces states to act to bolster their chances of survival. I missed this point in Weak States in International Relations Theory. This study then aims to finish what my dissertation started: to theorize how systemic vulnerabilities shape the international system and hence state behavior. The core of this work posits that positive, long-term, sustainable economic development for all states as [is] the only way to correct vulnerabilities. Creating a pragmatic, stable and sound economic policy for all states who are voluntarily open to the system (barring rogue states and peoples who prefer traditional living), is at the backbone of neutralizing vulnerability. An economically developed nation is more prepared to deal with systemic shock than others because it has the resources to do so. Developed countries are more prepared than others to deal with outbreaks of disease, financial crises, sudden environmental disaster, terrorism and drug trafficking and so on than weaker states because they have the resources to do so. Weaker, more underdeveloped states depend on great powers to bail them out during times of trouble; they know great powers must do so as a part of their hegemonic responsibility. Using theory and case studies, this work theorizes the structure of international politics in our day. Taking a holistic look at the mechanisms that guide state behavior, I demonstrate the simple fact that as a global community, we are all in this together. While states tend to pursue interests selfishly, the fact remains that one state’s trouble can spread throughout the globe. States only exist to give people the chance to practice self-determination and to survive against other states. These are all normative statements and do not reflect reality. This book is an attempt to describe reality divorced from traditional understandings of the state, taking into account changes in our world. The realists that stubbornly defend their theories (Kassab and Wu 2014) must take these matters seriously.

#### One of their SD development goals is ECON growth

Tom Cernev & Richard Fenner 20, Australian National University; Centre for Sustainable Development, Cambridge University Engineering Department, "The importance of achieving foundational Sustainable Development Goals in reducing global risk," Futures, Vol. 115, January 2020, Elsevier. Recut Justin

“Climate change” drives the need for Climate Action (SDG 13), “Cyber threat” may adversely impact technology implementation and advancement which will disrupt Sustainable Cities and Communities (SDG 11); Decent Work and Economic Growth (SDG 8) and the rate of introduction of Affordable and Clean Energy (SDG 7), with reductions in these goals having direct consequences in also reducing progress in the other goals which they are closely linked to. “Data Fraud or Threat” has the capacity to inhibit innovation and Industrial Performance (SDG 9), reducing competitiveness (and having the potential to erode societal confidence in governance processes).

### Unsustainable

#### Growth causes extinction via climate change, aging crisis, food and water wars, and global inequality—try or die for dedevelopment

Gagulina, 21

(Natalya Gagulina, Institute for Regional Economic Studies Russian Academy of Sciences Leading researcher, Artur Budagov, 2State University of Aerospace Instrumentation, Director of the Institute of Enterprinership Technologies, Elena Yanova, ITMO University, Faculty of Technological Management and Innovations, Department of Economics and Strategic Management, “Global Challenges of the Modern Paradigm of Economic Development,” SHS Web of Conferences 92 2021 NL)

1 Introduction Comprehension of the global problems at the beginning of the third millennium prompts us to take new approach to assessing the development of modern civilization, and sometimes to question the inviolability of values formed over centuries. For more than three centuries, the development of the world’s leading countries has been based on the paradigm, according to which realization of human creative potential occurs through the transformation of world and nature, and then society. Continuous growth of production and improvement of the human living standards, provided by the modern paradigm of development, are based on the ideas of progress, democracy, freedom and personal initiative. The flip side of the coin is exacerbation of key contradictions generated by the current paradigm of economic development: between wealth and poverty, liberal social practices and government guarantees, economic growth and the resource potential of nature. 2 Economic Development Paradigm Methods The progressive development of mankind within the framework of accepted scientific paradigm is continuous process of improving the laws, conditions of life, social reproduction, art, science, values. One of the most important results of formation of the modern development paradigm is to recreate the world general scientific picture as an integral system of scientific ideas about nature, man and society [1]. The important role in this is played by the rapid convergence of methodology of natural science and humanitarian knowledge. Thus, the ideas of irreversibility and variability in decision-making, the variety of directions for development of complex systems at bifurcation points and many other ideas that have been developed in synergetics are becoming more and more important for the humanities. The change in the place and role of man in the representation of most self-developing systems became manifestation of the principles of global evolutionism in the scientific paradigm of development and contributed to even greater dissemination of its ideas both in the scientific knowledge space and in the modern civilization space. The dominance of global evolutionism principles in the development paradigm has determined its influence on cultural values on the scale of the entire world economy. Besides convergence of the methodology of natural science and humanitarian knowledge, prerequisites are created for the convergence of the main, at first glance, diametrically opposed models of development of the modern East and West countries, which the main features are given in Table 1. Containing the human mind progress history, the modern paradigm of economic development has formed the basic laws, the laws of emergence and development of social relationships at all levels for many years to come. The manifestation of global evolutionism principles in the modern paradigm of economic development is becoming the important factor in cross-cultural interaction between East and West in connection with overarching significance of globalization, liberalization and informatization. Globalization has become tool for formation of world markets for goods, labour and capital, has expanded the information space to planetary scale. Liberalization, pushing the boundaries of private initiative in the implementation of economic activity, stimulated investment and entrepreneurship, created conditions for the effective use of information technologies. Informatization has created new capital-intensive and rapidly growing markets for infocommunication technologies and mass media. Perhaps the most significant result of the influence of these factors in formation of the cultural space at the turn of the XX-XXI centuries was the rooting and spread of the consumer society model on global scale, closed at consumption as a way of life. First of all, this was facilitated by new opportunities for standardizing the way of life, consciousness and behaviour, education, in increasing the role of supranational structures and transnational corporations, opened under the influence of globalization. The economy of consumer society is based on the principle of individual consumption, supported by system of attitudes and values that often ignore the laws of morality. Rapidly developing, dynamic and aggressive economy with its innovative guidelines and pronounced individualism of free personality, with active transformative vector in relation to the natural and social world, has had a huge impact on the entire social structure, starting with forms of human behaviour and social communication and ending with the rationalization of thinking in the whole [2,3]. The consumer economy does not encourage passivity and frugality, because they are accompanied by loss of consumer ability. Economic choice based on real human needs is replaced by choice dictated by the consumer society structure and the corresponding abstract values. Global scale result: overproduction and excessive consumption, accumulation of production and consumption wastes, anthropogenic pollution of atmosphere and water resources, energy overloads, etc. The processes generated by globalization are closely related to the tightening of competition in the world market for control over natural resources and information space through the use of the latest technologies. Market relations include natural resources that were previously outside the competition [4]. The problems of preserving the natural environment and ecology associated with degradation, and sometimes destruction of the environment of human life, are ignored. Social connections and relationships are increasingly falling into the sphere of private interests. Common human values are being levelled, creating the basis of morality, humanity and social justice. The influx of cheap labour into the labour market of prosperous countries complicates interethnic relations [5,6]. The influence of psychological shock of globalization processes creates the fertile ground for nationalism outbursts. Currently, the internationalization of all key problems is taking place against the background of globalization, liberalization and informatization: from interethnic and interconfessional conflicts to security problems [7,8]. This leads to the question of the crisis of the modern paradigm of economic development. 3 Results: Economic Development Paradigm Crisis The modern paradigm of economic development is continuation of the general development paradigm formed by the centuries-old history of scientific discoveries and achievements. At the present stage, the great influence on the general development paradigm, generally, and on the economic development paradigm, particularly, was exerted by convergence of methodology of natural science and humanitarian knowledge, exchange of attitudes of the current paradigm both within the natural science segment and in the field of natural sciences and social sciences and humanities. The combined application of principles of evolutionary and systemic approaches in the paradigm of economic development not only opened up new opportunities in describing complex self-regulating and self-developing systems, the search for approaches to managing such systems, but also identified problems that called into question the viability of paradigm itself. The aggravation of crisis situations in the economic, financial, socio-political, environmental and socio-spiritual spheres of the modern society life makes us take a new approach to understanding the modern paradigm of economic development. Achieving the better quality of life within the accepted paradigm of economic development seems to be difficult due to the problem of dominance of interests of subjects whose sources of income are non-renewable resources, harmful industries and outdated technologies. They not only stand in the way of progress, but also contribute to the emergence of such social risks as the loss of jobs, cuts in investment programs, reduction in tax payments to budgets of various levels, etc. Regarding the complication of classical contradictions and problems of the economy, some market instruments, mechanisms, institutions become poorly managed, stochastic, and acquire a spontaneous character. The existing classical contradictions are supplemented by new ones (Figure 1). Particularly, the classical contradiction between labour and capital was supplemented by contradictions between various forms of capital, rapidly developing science-intensive technologies of material production and archaic forms of capital reproduction, etc. At the international level, the contradiction between the world market globalization process and the national interests of the participating countries is growing [9], the crisis has emerged in the post-war system of international law and international organizations. A series of problematic situations that have no explanation by modern science and crises that arise in vital spheres of the economy indicate a crisis of the very economic development paradigm. At the same time, problems and challenges that are urgent for all countries of the world deserve special attention. 3.1 Global Problems and Challenges The term "global problems" began to be used in scientific literature in connection with concerns about population growth, environmental pollution, depletion of natural resources, etc., that is, almost simultaneously with the first models of J. Forrester, D. Meadows, and others. Understanding global problems as a set of social, natural-resource and socio-cultural problems, as the progressive development and preservation of civilization depends on the attitude towards them and which require the united efforts of all mankind for their resolution, we will group them (Figure 2). Among the problems of humanitarian nature are the problems of eliminating poverty, exploitation and other forms of social inequality, problems of education, health care, planning and regulation of the life level and quality. Natural resource problems include a wide range of problems caused not only by the objective limited natural resource potential of the planet, but also by the alarmingly high rates of its use. Comparing the growth rates of the planet's population and the rate of changes in the volumes of extraction of the main types of mineral raw materials, we see that the intensity of oil and gas consumption per capita is growing (Table 2). Problems that cannot be solved without revising international relations owe their origin to the loss of functionality by some codes of international law and international organizations. The close analysis of global problems, which are becoming more acute as the modern paradigm of economic development takes root, enable singling out the following ones from them: Climatic, ecological and biological aspects of the problem of human survival. The problem of preserving the individual integrity in the context of the disintegration of the traditional structures of transmission from generation to generation of such eternal global values as the value of labour, the living control of society over moral behaviour, etc. The inclusion of person simultaneously in many systems of social relations leads to personality splitting and stress. The problem of communicative unity of mankind and the need to resolve conflicts without the use of force. For successful dialogue focused on consent, tolerance, pluralism of opinions, new criteria and approaches are needed, and the use of double standards is unacceptable. The exacerbation of existing or the emergence of new global problems due to failures, which is adopted the economic development paradigm as a basis, produces global challenges (Figure 3). Challenges are consequence of the emergence of new factors in world development that disrupt the stability of the normal functioning of reproduction mechanisms, intercultural relations, etc. Thus, the acceleration of historical time is facilitated by a constant reduction in the life cycles of goods, services, infrastructures and ways, endless and rapid change of new methods of labour and technologies in the context of accelerating the period of implementation of scientific discoveries. This complicates the adaptation of people to changes in the technological, social and cultural environment. Not having time to fully realize the benefits of change, to take advantage of them, people are faced with new, more and more technically complex aspects of life. The global demographic imbalance, which manifests itself in the population structure change, the birth rate decrease and the indigenous population decline in developed countries, the general aging of the world's population, including the spread of the demographic deficit to some countries in Asia and South America, contributes to the emergence of migration waves, increases economic instability. The problem of shortage of food and fresh water in the world is caused not only by the fact of limited natural resources, but also by their irrational use [11]. Economic inequality, uneven distribution of food in the world and climate change have led to the fact that more than 1 billion people in underdeveloped countries are undernourished, and between 500 million and 1 billion people go hungry. The crisis of values, provoked by the predominance of the principles of global evolutionism in the development paradigm, threatens all further development of mankind. The problems and challenges associated with the new technological reality deserve special attention. 3.2 Digital Economy Problems and Challenges The contours of new technological reality in the context of global issues have emerged due to globalization, liberalization and informatization as the leading features of the modern paradigm of economic development. The emergence of the main innovations of new technological reality in form of information and telecommunication technologies, digital communication networks and virtual reality put on different scales the advantages and disadvantages of the digital economy, selectively presented in Figure 4. Digitalization satellites on global scale are the Internet of Things and smart cities, open source public access platforms, cloud information technologies, dynamic capitalization of Internet business and info-business, increase in the volume of financial assets and the emergence of their new forms (digital assets), predictive software events providing, increasing the influence of "new media" and much more [12-14]. The formation of information space covering the whole world has become innovative form of globalization, which is accompanied by its inherent problems. In our opinion, the following can be attributed to the global challenges of the digital economy: Accelerated virtualization of the economy associated with the phenomenon of virtual reality. According to M. Poster, the problematization of reality, which so far only occurs in the field of modern telecommunications (games, teleconferences, etc.), casts doubt on the validity, exclusivity and conventional evidence of "ordinary" time, space and identity. Information superhighways and virtual reality, which have not yet become common cultural practices, have enormous potential for creating such a subject that exists only into interactive environment. Examples of large-scale transformation processes caused by many years of virtualization can be observed in the economy financial sector [15-17]. b) The spontaneous reduction of jobs in the labour market and disappearance of occupations that were widespread and in demand until recently: teachers, shop assistants, cashiers, postmen, tourism managers, notaries, call centre operators, packers, accountants, etc. The number of "useless people" includes not only the listed professions "from the risk zone", but also older age categories, which find it more difficult to adapt to innovative technological changes. c) Computerization of the decision-making process at different levels, leading to the "cybernation" of the subject of control through the use of supercomputers. The inability of the subject of management to make adequate decisions about the most complex processes in social and technical systems in real time has led to the management crisis. Computer models, which incorporate more than a thousand mathematical equations and huge amounts of various kinds of data, enable to predict the types of behaviour of people in various situations and, in a time frame commensurate with the time for solving problems, develop ready-made solutions. d) The gradual decrease in the ability of individuals to make decisions due to formation of stereotype to overcome the limitation of individual cognitive abilities by tools of info communication technologies. The list of global challenges of the digital economy presented by us is very general, it can be supplemented and expanded taking into account the ongoing changes. 4 Discussions Global actions in response to global challenges are foreseen in almost all spheres of human life, which are usually associated with the human welfare and well-being. The list of global actions has more than half a century history and includes the UN Conference "Man and the Environment" (1972), the World Conservation Strategy (1980), the International Commission on Environment and Development Paper (1983), UN Conference on Environment and Development (COSR-92), Earth Summit +5, Millennium Declaration - 2000, Earth Summit - 2002, RIO + 20, Sustainable Development Goals (SDGs), developed and adopted by the UN for the period up to 2030, and a number of other equally important international events. It should be noted that the coordination of state policies in the field of legal regulation of information space, ecology, fight against terrorism, drug trafficking and crime also contributes to the development and implementation of global actions in response to global problems and challenges. At the same time, it can be argued that the crisis state of the modern paradigm of economic development is accompanied by a conflict of archaic and newest forms of economic reality, which "explode" it from the inside (Figure 5). The emergence of the newest forms of economic reality in the context of the acceleration of historical time creates the risk of delay in global actions in response to global challenges. This is especially true of the challenges associated with the economic space digitalization. 5 Conclusion The stability of adopted paradigm of economic development in the context of global challenges is under threat, therefore, a new look at the relationship "global challenges - global actions" is needed. The global problems and challenges we have outlined in the modern economic development paradigm force us to start searching for a new biocompatible and biocentric paradigm aimed at harmoniously solving the problems of life support, which is accompanied by revision of views on consumption and fair distribution, attitude to the living environment and nature, life values and dominant needs. The economic development paradigm change presupposes the initial condition change for existence of socio-ecological-economic system, which will radically affect the subsequent evolution of the system and the entire organizational structure of society. In this case, it seems appropriate, in our opinion, to use the quality economics methodology, which is distinguished by interdisciplinary and comprehensive scientific approach [18,19]. The economy of quality has features that make it possible to correlate it with a new, synergetic, paradigm for development of modern scientific knowledge. It is an integral part of all scientific areas, focusing on the need to take into account the quality features studied in a given aspect.

#### Corona sent shockwaves throughout the global economy and makes collapse inevitable—we need a new system to ensure survival

Tooze, 20

(Adam, history professor and director of the European Institute at Columbia University "The Normal Economy Is Never Coming Back," April 9 <https://foreignpolicy.com/2020/04/09/unemployment-coronavirus-pandemic-normal-economy-is-never-coming-back/> NL)

As the coronavirus lockdown began, the first impulse was to search for historical analogies—1914, 1929, 1941? As the weeks have ground on, what has come ever more to the fore is the historical novelty of the shock that we are living through. The economy is currently in something akin to free fall. If it were to continue to contract at its current pace, 12 months from now GDP would be [one-third lower](https://www.reuters.com/article/us-health-coronavirus-goldman/goldman-sachs-slashes-us-gdp-estimate-further-idUSKBN21I235) than at the beginning of 2020. That is a rate of shrinkage four times faster than during the Great Depression of the 1930s. There has never been a crash landing like this before. There is something new under the sun. And it is horrifying. As recently as five weeks ago, at the beginning of March, U.S. unemployment was at record lows. By the end of March, it had surged to somewhere around 13 percent. That is the highest number recorded since World War II. We don’t know the precise figure because our system of unemployment registration was not built to track an increase at this speed. On successive Thursdays, the number of those making initial filings for unemployment insurance has surged first to 3.3 million, then 6.6 million, and now by another 6.6 million. At the current rate, as the economist Justin Wolfers [pointed out](https://www.nytimes.com/2020/04/03/upshot/coronavirus-jobless-rate-great-depression.html) in the New York Times, U.S. unemployment is rising at nearly 0.5 percent per day. It is no longer unimaginable that the overall unemployment rate could reach 30 percent by the summer. Thursday’s news confirms that the Western economies face a far deeper and more savage economic shock than they have ever previously experienced. Regular business cycles generally start with the more volatile sectors of the economy—real estate and construction, for instance, or heavy engineering that depends on business investment—or sectors that are subject to global competition, such as the motor vehicles industry. In total, those sectors employ less than a quarter of the workforce. The concentrated downturn in those sectors transmits to the rest of the economy as a muffled shock. The coronavirus lockdown directly affects services—retail, real estate, education, entertainment, restaurants—where 80 percent of Americans work today. Thus the result is immediate and catastrophic. In sectors like retail, which has recently come under fierce pressure from online competition, the temporary lockdown may prove to be terminal. In many cases, the stores that shut down in early March will not reopen. The jobs will be permanently lost. Millions of Americans and their families are facing catastrophe. The shock is not confined to the United States. Many European economies cushion the effects of a downturn by subsidizing short-time working. This will moderate the surge in unemployment. But the collapse in economic activity cannot be disguised. The north of Italy is not just a luxurious tourist destination. It [accounts](https://www.bloomberg.com/news/articles/2020-03-31/nightmare-haunting-euro-s-founders-may-now-be-reality-with-italy) for 50 percent of Italian GDP. Germany’s GDP is predicted to fall by more than that of the United States, dragged down by its dependence on exports. The latest set of [forecasts](https://www.ft.com/content/b427db58-77e6-11ea-af44-daa3def9ae03) from the Organization for Economic Cooperation and Development are apocalyptic across the board. Hardest hit of all may be Japan, even though the virus has had a moderate impact there. In rich countries, we can at least attempt to make estimates of the damage. China was the first to initiate shutdowns on Jan. 23. The latest official figures show China’s unemployment at 6.2 percent, the highest number since records began in the 1990s, when the Chinese Communist Party reluctantly admitted joblessness was not a problem confined to the capitalist world. But that figure is clearly a gross understatement of the crisis in China. Unofficially, perhaps as many as [205 million migrant workers](https://www.scmp.com/economy/china-economy/article/3078251/coronavirus-chinas-unemployment-crisis-mounts-nobody-knows) were furloughed, more than a quarter of the Chinese workforce. How one goes about counting the damage to the Indian economy from Prime Minister Narendra Modi’s abrupt 21-day shutdown is anyone’s guess. Of India’s workforce of 471 million, only 19 percent are covered by social security, two-thirds have no formal employment contract, and at least [100 million](https://www.business-standard.com/article/economy-policy/coronavirus-lockdown-headed-home-as-migrants-have-no-room-to-isolate-120032501678_1.html) are migrant workers. Many of them have been sent in headlong flight back to their villages. There has been nothing like it since partition in 1947. The economic fallout from these immense human dramas defies calculation. We are left with the humdrum but no less remarkable statistic that this year, for the first time since reasonably reliable records of GDP began to be computed after World War II, the emerging market economies will contract. An entire model of global economic development has been brought skidding to a halt. An entire model of global economic development has been brought skidding to a halt. This collapse is not the result of a financial crisis. It is not even the direct result of the pandemic. The collapse is the result of a deliberate policy choice, which is itself a radical novelty. It is easier, it turns out, to stop an economy than it is to stimulate it. But the efforts that are being made to cushion the effects are themselves historically unprecedented. In the United States, the congressional stimulus package agreed within days of the shutdown is by far the largest in U.S. peacetime history. Across the world, there has been a move to open the purse strings. Fiscally conservative Germany has declared an emergency and removed its limits on public debt. Altogether, we are witnessing the largest combined fiscal effort launched since World War II. Its effects will make themselves felt in weeks and months to come. It is already clear that the first round may not be enough. An even more urgent task is to prevent the slowdown from turning into an immense financial crisis. It is commonly said that the U.S. Federal Reserve under Chairman Jerome Powell is following the 2008 playbook. This is true. Day by day, it spawns new programs to support every corner of the financial market. But what is different is the scale of the Fed’s interventions. To counter the epic shock of the shutdown, it has mobilized an immense wave of liquidity. In late March, the Fed was buying assets at a rate of $90 billion per day. This is more per day than Ben Bernanke’s Fed purchased most months. Every single second, the Fed was swapping almost a million dollars’ worth of Treasurys and mortgage-backed securities for cash. On the morning of April 9, at the same moment that the latest horrifying unemployment number was released, the Fed announced that it was launching an additional $2.3 trillion in asset purchases. This huge and immediate counterbalancing action has so far prevented an immediate global financial meltdown, but we now face a protracted period in which falling consumption and investment drive further contraction. Seventy-three percent of American households report having [suffered](https://www.ft.com/content/7a7233a3-160a-41be-8d63-40f64e041e57) a loss of income in March. For many, that loss is catastrophic, tipping them into acute need, default, and bankruptcy. Delinquencies on consumer debt will no doubt surge, leading to sustained damage to the financial system. Discretionary expenditure will be deferred. Petrol consumption in Europe has [fallen](https://www.ft.com/content/4c59fd16-6020-4798-b8f1-5df686bbd97a) by 88 percent. The market for automobiles is stone dead. Auto manufacturers across Europe and Asia are sitting on giant lots of unsold vehicles. The longer we sustain the lockdown, the deeper the scarring to the economy and the slower the recovery. In China, regular economic activity is inching back. But given the risk of second- and third-wave outbreaks, no one has any idea how far and fast the resumption of normal life can safely go. It seems likely, barring a dramatic medical breakthrough, that movement restrictions will need to stay in place to manage the unevenness of containment. A protracted and halting recovery seems far more likely at this point than a vigorous V-shaped bounce back. And even once current production and employment have restarted, we will be dealing with the financial hangover for years to come. The argument over fiscal policy is rarely engaged in the heat of the moment. In a crisis, it is easy to agree to spend money. But that fight is coming. We are engaged in the largest-ever surge in public debt in peacetime. Right now we are parking that debt on the balance sheet of central banks. Those central banks can also hold the interest rate low, which means that the debt service will not be exorbitant. But that defers the question of what to do with them. To the conventional mind debt must be eventually repaid through surpluses History suggests, however, there are also more radical alternatives. One would be a burst of inflation, though how that would be engineered given prevailing economic conditions is not obvious. Another would be a debt jubilee, a polite name for a public default (which would not be as drastic as it sounds if it affects the debts held on the account of the central bank). Some have [suggested](https://voxeu.org/article/fight-covid-pandemic-policymakers-must-move-fast-and-break-taboos#.Xos1vsVFjSp.twitter) it would be simpler for the central banks to cut out the business of buying debt issued by the government and instead simply to credit governments with a gigantic cash balance. And on 9 April that is exactly what the Bank of England [announced](https://www.ft.com/content/664c575b-0f54-44e5-ab78-2fd30ef213cb) it would be doing. For all intents and purposes, this means the central bank is simply printing money. That this is even being considered, and under a conservative government, is a measure of how extreme the situation is. It is also symptomatic that, rather than howls of outrage and immediate panic selling, the Bank of England’s decision has so far produced little more than a shrug from financial markets. They are under few illusions about the acrobatics that all the central banks are performing. This resigned attitude is helpful from the point of view of crisis-fighting. But do not expect the calm to last. When the lid comes off, politics will resume and so will the arguments about “debt burdens” and “sustainability.” When the lid comes off, politics will resume and so will the arguments about “debt burdens” and “sustainability.” And given the scale of the liabilities that have already been accumulated, we should expect it to get ugly.

**Tech can’t overcome fundamental constraints---their ev is unwarranted techno-optimism.**

Robert **Jensen 18**, professor in the School of Journalism at the University of Texas at Austin and board member of the Third Coast Activist Resource Center in Austin, 1-3-2018, "Life Without Limits: The Delusions of Technological Fundamentalism," Resilience, http://www.resilience.org/stories/2018-01-03/life-without-limits-the-delusions-of-technological-fundamentalism/

This ideology of human supremacy leads us to **believe** that our species’ **cleverness** allows us to **ignore the limits placed on all life forms by the larger living world**, of which we are but one component. What we once quaintly called “environmentalism” — which too often focused on technical solutions to discrete problems rather than challenging human arrogance and the quest for endless affluence — is **no longer adequate** to deal with the **multiple, cascading ecological crises** that define our era: climate destabilization, species extinction, soil erosion, groundwater depletion, toxic waste accumulation, and on and on. **Playing god got us into this trouble, and more of the same won’t get us out.** This inability to accept the limits that come with being part of “nature” – a strange term when used to contrast with “human,” as if humans were somehow not part of the natural world – was on my mind as I read two new books about controversial topics that typically are thought of as social, not ecological, issues: Transgender Children and Young People: Born in Your Own Body, edited by Heather Brunskell-Evans and Michele Moore, and Surrogacy: A Human Rights Violation, by Renate Klein. [Disclaimer: I have met Brunskell-Evans in our shared work in the radical feminist critique of pornography, and Klein is co-publisher of Spinifex Press, which published my book The End of Patriarchy: Radical Feminism for Men.] Both books offer a feminist critique of the ideology and practices of these movements that herald medical/technological “solutions” to struggles with gender norms and infertility. Brunskell-Evans’ and Moore’s book brings together researchers, activists, mental health practitioners and parents who question such practices as puberty suppression to block the development of secondary sex characteristics as treatment for gender dysphoria. Are such disruptions of a child’s development with powerful drugs warranted, given the lack of testing and absence of a clear understanding of the etiology of transgenderism? The authors challenge what has rapidly become the liberal dogma of embracing medicalized approaches to the very real problem of patriarchal gender norms (the demand that boys must act one way and girls another) that constrain our lives. Klein marshals research and the testimony of surrogates to point out that another liberal dogma — affluent individuals have a right to “rent a womb” so they may have a child genetically related to them — involves considerable risks for the surrogate mother (sometimes referred to as the “gestational carrier”). The author’s assessment is blunt, but well supported: modern surrogacy is a form of exploitation of women and trafficking in babies. Both books demonstrate the enduring relevance of the radical branch of feminism that highlights men’s attempts to control and exploit women’s reproductive power and sexuality as a key feature of men’s dominance in patriarchal societies. And both are critical of the naive celebration of high-tech medicine to deal with issues that stem from patriarchy’s rigid, repressive and reactionary gender norms. Those radical feminist challenges dovetail with a radical ecological critique that reminds us that being alive — being a carbon-based creature that exists within the limits of the ecosphere — means that we should be **skeptical** of claims that we can **magically transcend those limits**. The high-energy, high-tech, human-defined world in which we live can **lull us** into believing that we are like gods in our ability to shape the world, and to shape our own bodies. Of course, drugs, surgery and medical techniques routinely save lives and improve our lives, in ways that are “unnatural” in some sense. To highlight these questions does not mean that lines are easy to draw between what is appropriate and what is ill-advised. But we **invite serious miscalculations** when we embrace without critical **self-reflection** the assumption that we can manipulate our human-centered worlds without concern for the limits of the larger living world. Many of us have experienced this in end-of-life care decisions for ourselves or loved ones. When are high-tech medical interventions that prolong life without concern for quality of life a mistake? I have had long conversations with friends and family about where the line should be drawn, not only to make my own views clear but to search for collective understanding. The fact that the line is hard to draw, and even harder to face when arriving at it, doesn’t make the question any less relevant. The fact that there is no obvious and easy answer doesn’t mean we can avoid the question. Elective cosmetic surgery is perhaps the best example of the culture’s rejection of limits. All living things eventually die, and human appearance changes as we age, yet many people search for ways to stave off that aging or to change their appearance for other non-medical reasons. In 2017, Americans spent more than $15 billion on cosmetic procedures (surgical and nonsurgical), 91% of which were performed on women. The two most common surgical procedures are liposuction and breast augmentation. Although some people who get liposuction are overweight, it is not a treatment for obesity, and breast augmentation is rarely related to physical health. These procedures typically are chosen by people seeking to conform to social norms about appearance. With this humility about high-tech human intervention in mind, how should we understand the experience of feeling at odds with gender norms? How should we reconcile the physical inability to bear children with the desire to have children? There are no obvious or easy answers, but I believe that as a culture we are better served by starting with the recognition that we are not gods, that we cannot endlessly manipulate the world without risking unintended consequences for self and others. How does the rejection of limits impede our ability to first examine and then resist the impositions of patriarchy, to find new understandings of sex/gender and new social relationships for caring for children? At the planetary level, we have considerable evidence that our faux-god attempts to dominate the ecosphere — which started most dramatically with the invention of agriculture 10,000 years ago and intensified with the exploitation of fossil fuels — now **make the future of a large-scale human population uncertain**. The lesson some of us take from that is to **turn away from the “technological fundamentalism”** that leads us to see all problems as **having high-energy/high-tech solutions** and consider **different ways of living within the biophysical limits of the planet.**

### Warming

#### Stopping growth solves extinction from eco collapse – decoupling is impossible even under perfect conditions, and transition dangers are overhyped

Hickel 18 [Jason Hickel is an anthropologist, author, and a fellow of the Royal Society of Arts. Why Growth Can’t Be Green. Foreign Policy Magazine. September 12, 2018. https://foreignpolicy.com/2018/09/12/why-growth-cant-be-green/]

Warnings about ecological breakdown have become ubiquitous. Over the past few years, major newspapers, including the Guardian and the New York Times, have carried alarming stories on soil depletion, deforestation, and the collapse of fish stocks and insect populations. These crises are being driven by global economic growth, and its accompanying consumption, which is destroying the Earth’s biosphere and blowing past key planetary boundaries that scientists say must be respected to avoid triggering collapse.

Many policymakers have responded by pushing for what has come to be called “green growth.” All we need to do, they argue, is invest in more efficient technology and introduce the right incentives, and we’ll be able to keep growing while simultaneously reducing our impact on the natural world, which is already at an unsustainable level. In technical terms, the goal is to achieve “absolute decoupling” of GDP from the total use of natural resources, according to the U.N. definition.

It sounds like an elegant solution to an otherwise catastrophic problem. There’s just one hitch: New evidence suggests that green growth isn’t the panacea everyone has been hoping for. In fact, it isn’t even possible.

Green growth first became a buzz phrase in 2012 at the United Nations Cosnference on Sustainable Development in Rio de Janeiro. In the run-up to the conference, the World Bank, the Organization for Economic Cooperation and Development, and the U.N. Environment Program all produced reports promoting green growth. Today, it is a core plank of the U.N. Sustainable Development Goals.

But the promise of green growth turns out to have been based more on wishful thinking than on evidence. In the years since the Rio conference, three major empirical studies have arrived at the same rather troubling conclusion: Even under the best conditions, absolute decoupling of GDP from resource use is not possible on a global scale.

A team of scientists led by the German researcher Monika Dittrich first raised doubts in 2012. The group ran a sophisticated computer model that predicted what would happen to global resource use if economic growth continued on its current trajectory, increasing at about 2 to 3 percent per year. It found that human consumption of natural resources (including fish, livestock, forests, metals, minerals, and fossil fuels) would rise from 70 billion metric tons per year in 2012 to 180 billion metric tons per year by 2050. For reference, a sustainable level of resource use is about 50 billion metric tons per year—a boundary we breached back in 2000.

The team then reran the model to see what would happen if every nation on Earth immediately adopted best practice in efficient resource use (an extremely optimistic assumption). The results improved; resource consumption would hit only 93 billion metric tons by 2050. But that is still a lot more than we’re consuming today. Burning through all those resources could hardly be described as absolute decoupling or green growth.

In 2016, a second team of scientists tested a different premise: one in which the world’s nations all agreed to go above and beyond existing best practice. In their best-case scenario, the researchers assumed a tax that would raise the global price of carbon from $50 to $236 per metric ton and imagined technological innovations that would double the efficiency with which we use resources. The results were almost exactly the same as in Dittrich’s study. Under these conditions, if the global economy kept growing by 3 percent each year, we’d still hit about 95 billion metric tons of resource use by 2050. Bottom line: no absolute decoupling.

Finally, last year the U.N. Environment Program—once one of the main cheerleaders of green growth theory—weighed in on the debate. It tested a scenario with carbon priced at a whopping $573 per metric ton, slapped on a resource extraction tax, and assumed rapid technological innovation spurred by strong government support. The result? We hit 132 billion metric tons by 2050. This finding is worse than those of the two previous studies because the researchers accounted for the “rebound effect,” whereby improvements in resource efficiency drive down prices and cause demand to rise—thus canceling out some of the gains.

Study after study shows the same thing. Scientists are beginning to realize that there are physical limits to how efficiently we can use resources. Sure, we might be able to produce cars and iPhones and skyscrapers more efficiently, but we can’t produce them out of thin air. We might shift the economy to services such as education and yoga, but even universities and workout studios require material inputs. Once we reach the limits of efficiency, pursuing any degree of economic growth drives resource use back up.

These problems throw the entire concept of green growth into doubt and necessitate some radical rethinking. Remember that each of the three studies used highly optimistic assumptions. We are nowhere near imposing a global carbon tax today, much less one of nearly $600 per metric ton, and resource efficiency is currently getting worse, not better. Yet the studies suggest that even if we do everything right, decoupling economic growth with resource use will remain elusive and our environmental problems will continue to worsen.

Preventing that outcome will require a whole new paradigm. High taxes and technological innovation will help, but they’re not going to be enough. The only realistic shot humanity has at averting ecological collapse is to impose hard caps on resource use, as the economist Daniel O’Neill recently proposed. Such caps, enforced by national governments or by international treaties, could ensure that we do not extract more from the land and the seas than the Earth can safely regenerate. We could also ditch GDP as an indicator of economic success and adopt a more balanced measure like the genuine progress indicator (GPI), which accounts for pollution and natural asset depletion. Using GPI would help us maximize socially good outcomes while minimizing ecologically bad ones.

But there’s no escaping the obvious conclusion. Ultimately, bringing our civilization back within planetary boundaries is going to require that we liberate ourselves from our dependence on economic growth—starting with rich nations. This might sound scarier than it really is. Ending growth doesn’t mean shutting down economic activity—it simply means that next year we can’t produce and consume more than we are doing this year. It might also mean shrinking certain sectors that are particularly damaging to our ecology and that are unnecessary for human flourishing, such as advertising, commuting, and single-use products.

But ending growth doesn’t mean that living standards need to take a hit. Our planet provides more than enough for all of us; the problem is that its resources are not equally distributed. We can improve people’s lives right now simply by sharing what we already have more fairly, rather than plundering the Earth for more. Maybe this means better public services. Maybe it means basic income. Maybe it means a shorter working week that allows us to scale down production while still delivering full employment. Policies such as these—and countless others—will be crucial to not only surviving the 21st century but also flourishing in it.

#### Warming is inevitable absent a shift to zero emissions --- we’re busting through the carbon budget and renewables and CCS don’t arrive in time

Mooney and Dennis 18

Chris Mooney and Brady Dennis, Reporters for the Washington Post, “The world has barely 10 years to get climate change under control, U.N. scientists say.” The Washington Post. October 7, 2018. https://www.washingtonpost.com/energy-environment/2018/10/08/world-has-only-years-get-climate-change-under-control-un-scientists-say/?utm\_term=.25de27d0202d

--Also an answer to CCS!

The world stands on the brink of failure when it comes to holding global warming to moderate levels, and nations will need to take “unprecedented” actions to cut their carbon emissions over the next decade, according to a landmark report by the top scientific body studying climate change.

With global emissions showing few signs of slowing and the United States — the world’s second-largest emitter of carbon dioxide — rolling back a suite of Obama-era climate measures, the prospects for meeting the most ambitious goals of the 2015 Paris agreement look increasingly slim. To avoid racing past warming of 1.5 degrees Celsius (2.7 degrees Fahrenheit) over preindustrial levels would require a “rapid and far-reaching” transformation of human civilization at a magnitude that has never happened before, the group found.

“There is no documented historic precedent” for the sweeping change to energy, transportation and other systems required to reach 1.5 degrees Celsius, the U.N. Intergovernmental Panel on Climate Change (IPCC)[wrote](https://www.ipcc.ch/) in a report requested as part of the 2015 Paris climate agreement.

At the same time, however, the report is being received with hope in some quarters because it affirms that 1.5 degrees Celsius is still possible — if emissions stopped today, for instance, the planet would not reach that temperature. It is also likely to galvanize even stronger climate action by focusing on 1.5 degrees Celsius, rather than 2 degrees, as a target that the world cannot afford to miss.

“Frankly, we’ve delivered a message to the governments,” said Jim Skea, a co-chair of the IPCC panel and professor at Imperial College London, at a press event following the document’s release. “It’s now their responsibility … to decide whether they can act on it.” He added, “What we’ve done is said what the world needs to do.”

The transformation described in the document is breathtaking, and the speed of change required raises inevitable questions about its feasibility.

Most strikingly, the document says the world’s annual carbon dioxide emissions, which amount to more than 40 billion tons per year, would have to be on an extremely steep downward path by 2030 to either hold the world entirely below 1.5 degrees Celsius, or allow only a brief “overshoot” in temperatures.

Overall reductions in emissions in the next decade would probably need to be more than 1 billion tons per year, larger than the current emissions of all but a few of the very largest emitting countries. By 2050, the report calls for a total or near-total phaseout of the burning of coal.

'Understanding the Arctic is really a key to understanding the whole global system'

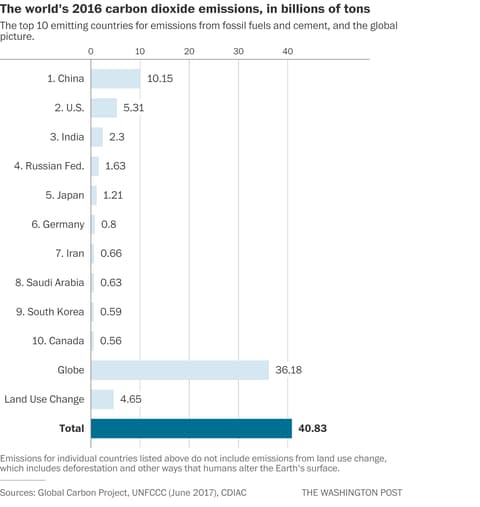
Mark Furze, a geoscientist and professor at MacEwan University, discusses the importance of understanding how climate change is impacting the Arctic. (Alice Li/TWP)

“It’s like a deafening, piercing smoke alarm going off in the kitchen. We have to put out the fire,” said Erik Solheim, executive director of the U.N. Environment Program. He added that the need to either stop emissions entirely by 2050 or find some way to remove as much carbon dioxide from the air as humans put there “means net zero must be the new global mantra.”

The radical transformation also would mean that, in a world projected to have more than 2 billion additional people by 2050, large swaths of land currently used to produce food would instead have to be converted to growing trees that store carbon and crops designated for energy use. The latter would be used as part of a currently nonexistent program to get power from trees or plants and then bury the resulting carbon dioxide emissions in the ground, leading to a net subtraction of the gas from the air — bioenergy with carbon capture and storage, or BECCS.

“Such large transitions pose profound challenges for sustainable management of the various demands on land for human settlements, food, livestock feed, fibre, bioenergy, carbon storage, biodiversity and other ecosystem services,” the report states.

The document in question was produced relatively rapidly for the cautious and deliberative IPCC, representing the work of nearly 100 scientists. It went through an elaborate peer-review process involving tens of thousands of comments. The final 34-page “summary for policymakers” was agreed to in a marathon session by scientists and government officials in Incheon, South Korea, over the past week.

  
(none)

The report says the world will need to develop large-scale “negative emissions” programs to remove significant volumes of carbon dioxide from the atmosphere. Although the basic technologies exist, they have not caught on widely, and scientists have strongly questioned whether such a program can be scaled up in the brief period available.

The bottom line, Sunday’s report found, is that the world is woefully off target.

Current promises made by countries as part of the Paris climate agreement would lead to about 3 degrees Celsius (5.4 degrees Fahrenheit) of warming by the end of the century, and the Trump administration recently released an analysis [assuming about 4 degrees Celsius (7.2 degrees Fahrenheit)](https://www.washingtonpost.com/national/health-science/trump-administration-sees-a-7-degree-rise-in-global-temperatures-by-2100/2018/09/27/b9c6fada-bb45-11e8-bdc0-90f81cc58c5d_story.html?utm_term=.de105fd573a8)by 2100 if the world takes no action.

The IPCC is considered the definitive source on the state of climate science, but it also tends to be conservative in its conclusions. That’s because it is driven by a consensus-finding process, and its results are the product of not only science, but negotiation with governments over its precise language.

In Sunday’s report, the body detailed the magnitude and unprecedented nature of the changes that would be required to hold warming to 1.5 degrees Celsius, but it held back from taking a specific stand on the feasibility of meeting such an ambitious goal. (An [early draft](http://www.climatechangenews.com/2018/02/13/leaked-draft-summary-un-special-report-1-5c-climate-goal-full/) had cited a “very high risk” of warming exceeding 1.5 degrees Celsius; that language is now gone, even if the basic message is still easily inferred.)

“If you’re expecting IPCC to jump up and down and wave red flags, you’re going to be disappointed,” said Phil Duffy, president of the Woods Hole Research Center. “They’re going to do what they always do, which is to release very cautious reports in extremely dispassionate language.”

Some researchers, including Duffy, are skeptical of the scenarios that the IPCC presents that hold warming to 1.5 degrees Celsius, particularly the reliance on negative-emissions technologies to keep the window open.

“Even if it is technically possible, without aligning the technical, political and social aspects of feasibility, it is not going to happen,” added Glen Peters, research director of the Center for International Climate Research in Oslo. “To limit warming below 1.5 C, or 2 C for that matter, requires all countries and all sectors to act.”

Underscoring the difficulty of interpreting what’s possible, the IPCC gave two separate numbers in the report for Earth’s remaining “carbon budget,” or how much carbon dioxide humans can emit and still have a reasonable chance of remaining below 1.5 degrees Celsius. The upshot is that humans are allowed either 10 or 14 years of current emissions, and no more, for a two-thirds or better chance of avoiding 1.5 degrees Celsius.

The already limited budget would shrink further if other greenhouse gases, such as methane, aren’t controlled or if and when Arctic permafrost becomes a major source of new emissions.

But either way — in a move that may be contested — researchers have somewhat increased the carbon budget in comparison with where the IPCC set it in 2013, giving another reason for hope.

The new approach buys some time and “resets the clock for 1.5 degrees Celsius to ‘five minutes to midnight,’ ” said Oliver Geden, head of the research division of the German Institute for International and Security Affairs.

The report is sure to be the central focus of attention this December in Poland when the next meeting of the parties to the Paris climate agreement is held, and countries begin to contemplate how they can up their ambition levels, as the agreement requires them to do over time.

Meanwhile, the report clearly documents that a warming of 1.5 degrees Celsius would be very damaging and that 2 degrees — which used to be considered a reasonable goal — could approach intolerable in parts of the world.

“1.5 degrees is the new 2 degrees,” said Jennifer Morgan, executive director of Greenpeace International, who was in Incheon for the finalization of the report.

Specifically, the document finds that instabilities in Antarctica and Greenland, which could usher in sea-level rise measured in feet rather than inches, “could be triggered around 1.5°C to 2°C of global warming.” Moreover, the total loss of tropical coral reefs is at stake because 70 to 90 percent are expected to vanish at 1.5 degrees Celsius, the report finds. At 2 degrees, that number grows to more than 99 percent.

The report found that holding warming to 1.5 degrees Celsius could save an Alaska-size area of the Arctic from permafrost thaw, muting a feedback loop that could lead to still more global emissions. The occurrence of entirely ice-free summers in the Arctic Ocean goes from one per century to one per decade between 1.5 and 2 degrees, it found — one of many ways in which the mere half a degree has large real-world consequences.

Risks of extreme heat and weather events just rise and rise as temperatures do, meaning these would be worse worldwide the more it warms.

To avoid that, in barely more than 10 years, the world’s percentage of electricity from renewables such as solar and wind power would have to jump from the current 24 percent to something more like 50 or 60 percent. Coal and gas plants that remain in operation would need to be equipped with technologies, collectively called carbon capture and storage (CCS), that prevent them from emitting carbon dioxide into the air and instead funnel it to be buried underground. By 2050, most coal plants would shut down.

Cars and other forms of transportation, meanwhile, would need to be shifting strongly toward being electrified, powered by these same renewable energy sources. At present, transportation is far behind the power sector in the shift to low-carbon fuel sources. Right now,[according to](https://www.iea.org/media/publications/mtrmr/Renewables2017ExecutiveSummary.PDF) the International Energy Agency, only 4 percent of road transportation is powered by renewable fuels, and the agency has projected only a 1 percent increase by 2022.

#### Concede spektor

### Impact D to other things

#### Toplevel – they don’t get new terminal impacts to anything – its their fault they read a laundry list cards with no explanations of why their impacts are bad – giving them new impact scenarios in the 1ar is the equivalanet of letting the aff read new internal links or a new advantage because it wasn’t a complete argument in the 1AC – that decimates neg strategy because it restarts the round in the 1ar and moots a 7 minute NC

#### SDGs solve nothing and fail.

Hickel 20 Jason Hickel 9-30-2020 “The World’s Sustainable Development Goals Aren’t Sustainable” <https://foreignpolicy.com/2020/09/30/the-worlds-sustainable-development-goals-arent-sustainable> (Fellow of the Royal Society of Arts, Professor at the Institute for Environmental Science and Technology at the Autonomous University of Barcelona, Ph.D. from the University of Virginia)//re-cut by Elmer

In 2015, the world’s governments signed on to the U.N. Sustainable Development Goals (SDGs) with a commitment to bring the global economy back into balance with the living world. Now, five years later, as the U.N. General Assembly convenes online to discuss the global ecological crisis, everyone wants to know how countries are performing. To answer this question, delegates and policymakers have referred to a metric called the SDG Index, which was developed by Jeffrey Sachs “to assess where each country stands with regard to achieving the Sustainable Development Goals.” The metric tells a very clear story. Sweden, Denmark, Finland, France, and Germany—along with most other rich Western nations—rise to the top of the rankings, giving casual observers the impression that these countries are real leaders in achieving sustainable development. There’s only one problem. Despite its name, the SDG Index has very little to do with sustainable development all. In fact, oddly enough, the countries with the highest scores on this index are some of the most environmentally unsustainable countries in the world. Take Sweden, for example. Sweden scores an impressive 84.7 on the index, topping the pack. But ecologists have long pointed out that Sweden’s “material footprint”—the quantity of natural resources that the country consumes each year—is one of the biggest in the world, right up there with the United States, at 32 metric tons per person. To put this in perspective, the global average is about 12 tons per person, and the sustainable level is about 7 tons per person. In other words, Sweden is consuming nearly five times over the boundary. There is nothing sustainable about this kind of consumption. If everyone on the planet were to consume as Sweden does, global resource use would exceed 230 billion tons of stuff per year. To get a sense for what this would look like, consider all the resources that we presently extract, produce, transport, and consume around the world each year—and all of the ecological damage that this causes—and triple it. Or take Finland, for example, which is No. 3 on the SDG Index. Finland’s carbon footprint is about 13 metric tons of carbon dioxide per person per year, similar to that of Saudi Arabia. This makes it one of the most polluting countries in the world, in per capita terms, and a major contributor to climate breakdown. For comparison, China’s carbon footprint is about 7 tons per person. India’s is less than 2. If the whole world were to consume as much fossil fuels as Finland does, the planet would be literally uninhabitable. This isn’t just a matter of a few odd results. Data published by scientists at the University of Leeds shows that all of the top-ranked countries in the SDG Index have significantly overshot their fair share of planetary boundaries, in consumption-based terms—not only when it comes to resource use and emissions but also in terms of land use and chemical flows like nitrogen and phosphorous. It is physically impossible for all nations to consume and pollute at the level of the SDG top performers without destroying our planet’s biosphere. In other words, the SDG Index is, from the perspective of ecology, incoherent. It creates the illusion that rich countries have high levels of sustainability when in fact they do not. So what’s going on here? Well, the SDG Index is directly linked to the Sustainable Development Goals. There are 17 goals, each of which include a number of targets. The SDG Index takes indicators for each of these targets (where data is available), indexes them, and then averages them together to arrive at a score for each goal. Then the 17 goals are averaged together in turn to come up with the final figure. All of this seems reasonable enough, on the face of it. But taking this approach means introducing a number of analytical problems. First, there is a weighting problem. The SDGs include three different kinds of indicators: Some focus on ecological impact (like deforestation and biodiversity loss), some focus on social development (like education and hunger), and some focus on infrastructure development (like transportation and electricity). Most of the SDGs contain a mix of these, but the ecological indicators are almost always swamped, as it were, by the development indicators. For example, the SDG Index has four indicators for Goal 11 (on “sustainable cities and communities”); three of them are development indicators, while only one of them has to do with ecological impact. This means that if a country performs well on the development indicators, its score for that goal will look good even if it fails in terms of sustainability. This issue is compounded by a second problem, namely, that only four of the 17 SDGs deal mostly or wholly with ecological sustainability (Goals 12 through 15). The other 13 are mostly focused on development. Once again, this means that good performance on the development goals outweighs poor performance on the sustainability goals, so countries like Sweden, Germany, and Finland can rise to the top of the index (with the United States ranking in the top 20 percent) even though they have highly unsustainable levels of ecological impact. The final problem is that the vast majority of the ecological indicators are territorial metrics that do not account for impacts related to international trade. For instance, take the air pollution indicator in Goal 11. Rich countries come out looking clean—but this is largely because they have offshored most of their polluting industries to countries in the global south since the 1980s, thus shifting the problem abroad. So too with the indicators on deforestation, overfishing, and so on: most of this damage happens in poorer countries, but it is disproportionately caused by overconsumption in richer countries, and quite often perpetrated by corporations or investors headquartered there. As a result, poorer countries get punished in the SDG Index for being harmed and polluted by richer countries. Of course, in many cases territorial metrics are appropriate; but there are a number of indicators in the SDG Index that should be reckoned as well in consumption-based terms and yet are not. In effect, the SDG Index celebrates rich countries while turning a blind eye to the damage they are causing. Ecological economists have long warned against this approach. It violates the principle of “strong sustainability,” which holds that good performance on development indicators cannot legitimately substitute for destructive levels of ecological impact. The SDG Index team are aware of this problem. It’s even mentioned (briefly) in their methodological notes—but then it’s swept under the rug in favor of a final metric that has little grounding in ecological principles. Ultimately, metrics of sustainable development need to be universalizable. In other words, the top performers on the index should represent a standard that all nations could aspire to achieve without this leading to a collapse of global ecosystems. That’s not the case with the SDG Index, where rich countries are held up as models when in reality, as the Leeds research shows, they are a big part of the problem. The United Nations needs to redesign the index to correct these issues. This can be done by rendering the ecological indicators in consumption-based terms wherever relevant and possible, to take account of international trade, and by indexing the ecological indicators separately from the development indicators so that we can see clearly what’s happening on each front. This way we can celebrate what countries like Denmark and Germany have achieved in terms of development while also recognizing that they are major drivers of ecological breakdown and need urgently to change course, with rapid reductions in emissions and resource use. Until then, we should avoid using the SDG Index as a metric of progress in sustainable development, because it’s not. Given the stakes of the crisis we face, we need to tell more honest, accurate stories about what’s happening to our planet and who is responsible for it.

#### Their LaFortune preempt is garbage – asserting your methodology is sound a dozen times in a card isn’t enough to overcome structural environmental and technological barriers our cards identifies. Their indict of Hickel is that it inaccurately claims SDG glamorize rich countries but their card then PROMPTLY CONCLUDES that rich northern European countries top the SDG index.

#### No Impact to Failed States – conflicts don’t escalate

Michael J. Mazarr 14, Professor of National Security Strategy at the National War College, “The Rise and Fall of the Failed-State Paradigm”, January/February 2014, Foreign Affairs, http://www.foreignaffairs.com/articles/140347/michael-j-mazarr/the-rise-and-fall-of-the-failed-state-paradigm

From one angle, the concern with weak states could be seen as a response to actual conditions on the ground. Problems had always festered in disordered parts of the developing world. Without great- power conflict as an urgent national security priority, those problems were more clearly visible and harder to ignore. From another angle, it could be seen as a classic meme -- a concept or intellectual fad riding to prominence through social diffusion, articles by prominent thinkers, a flurry of attention from the mainstream press, and a series of foundation grants, think-tank projects, roundtables, and conferences.¶ From a third angle, however, it could be seen as a solution to an unusual concern confronting U.S. policymakers in this era: what to do with a surplus of national power. The United States entered the 1990s with a dominant international position and no immediate threats. Embracing a substantially reduced U.S. global role would have required a fundamental reassessment of the prevailing consensus in favor of continued primacy, something few in or around the U.S. national security establishment were prepared to consider. Instead, therefore, whether consciously or not, that establishment generated a new rationale for global engagement, one involving the application of power and influence to issues that at any other time would have been seen as secondary or tertiary. Without a near-peer competitor (or several) to deter or a major war on the horizon, Washington found a new foreign policy calling: renovating weak or failing states.¶ THE DECLINE OF A STRATEGIC NARRATIVE¶ The practical challenges of state-building missions are now widely appreciated. They tend to be long, difficult, and expensive, with success demanding an open-ended commitment to a messy, violent, and confusing endeavor -- something unlikely to be sustained in an era of budgetary austerity. But the last decade has driven home intellectual challenges to the concept as well.¶ The threat posed by weak and fragile states, for example, turned out to be both less urgent and more complex and diffuse than was originally suggested. Foreign Policy’s Failed States Index for 2013 is not exactly a roster of national security priorities; of its top 20 weak states, very few (Afghanistan, Iraq, and Pakistan) boast geostrategic significance, and they do so mostly because of their connection to terrorism. But even the threat of terrorism isn’t highly correlated with the current roster of weak states; only one of the top 20, Sudan, appears on the State Department’s list of state sponsors of terrorism, and most other weak states have only a marginal connection to terrorism at best.

#### No retaliation from cyberattacks– lack of attribution, it’ll be small-scale, and it’s only to justify already-made decisions – no one has the incentive to cause a foreign first strike

Lewis ’16 (James; 2/17/2016; senior vice president at the Center for Strategic and International Studies, worked at the Departments of State and Commerce as a Foreign Service officer and as a member of the Senior Executive Service, rapporteur for the UN Group of Government Experts on Information Security; “Benefits Are Great, and the Risks Exist Anyway,” <https://www.nytimes.com/roomfordebate/2012/06/04/do-cyberattacks-on-iran-make-us-vulnerable-12/benefits-are-great-and-the-risks-exist-anyway>; Date Accessed: 8/15/2017; DS)

Do U.S. cyberattacks on Iran protect us or endanger us? We could better ask if having a downed pilot paraded through the streets of Tehran is preferable to cyberattack, or whether it is better to risk the losses that would accompany the **series of attacks** needed to destroy well-defended nuclear facilities. With Stuxnet, there are no television shots of burning buildings, weeping victims or tortured pilots. The politics of cyberattack as an alternative are **compelling**, although the attacks themselves **lack the destructiveness** of their kinetic brethren. The risks of Iran retaliating are **not increased**. The regime already blamed Stuxnet on the United States and Israel. In any case, we have been in sporadic covert conflict with Iran for decades, beginning with the hostages and embassy bombings, Iranian attacks in Iraq, and recent plots -- using proxies to provide a tissue of deniability -- against United States diplomats. Nor do cyberattacks against Iran **increase the risk of damaging cyberattacks** against the United States. It is true that we are defenseless; efforts to make us safer are hamstrung by self-interest, ideology and the gridlock of American politics. But we are no more vulnerable today than we were the day before the news. If someone decides to attack us, they may cite Iran as precedent, but it will only be to **justify a decision they had already made**.

### Econ D/War turn

#### You are cognitively predispositioned to default to the goodness of neoliberal structures – their scholarship is ethically bankrupt and their scenarios are fabricated

Radical Notes 8 – website focusing on capitalism ("Knowledge Production under Neoliberal Capitalism," 9-23-2008, Available Online at https://radicalnotes.com/2008/09/23/6844/, Accessed on 6-26-2017 //JJ)

The knowledge system that we all are aware of emanates from the different institutions that the system brings into existence. Our imagination fails to register anything outside the boundaries of the given, defined institutional framework as developing any kind of knowledge system. Hence, there have not only been debates about how to understand and resurrect the hegemony and domination that characterises the very processes of knowledge production. This hegemony is bolstered by ever renewing processes of strengthening the presence of State within the educational arena. Scholars have gone on to argue that a process of militarization and corporatisation of schools go simultaneously under this system (Saltman, & Gabbard, 2003; McLaren, 2005). Efforts have been made to understand and explain how these changes are at different levels – ranging from the need to redefine role of schools (as evident in number of experiments in alternative schooling) to the idea of looking at the education as a product of the capitalist system and therefore emphasis has been towards understanding the processes of education as embedded in the systemic characteristics of capitalism (McLaren, 2005; Farahmandpur, 2006; Allman, McLaren and Rikowski, 2005; Hill, 2004; Gibson, 2006). What we confront today in the educational sphere need not be taken as a surprise as it flows as a natural consequence of the character of capitalist expansion and its tendency towards uncontrolled commodification of our existential realities and its different aspects. The discourses in contemporary world trying to understand the neoliberal impact on societies emanate from different vantage points. Some of the discourses look at its inequality generating characteristic as evil and argue for better and more enhanced role of state as against the increasing role of the private capital. But such discourses get trapped in the framework of ahistorical analyses. They fail to disclose the character of the state as a conjunctural venue where interests of capital intersect with the interests of masses (seen as demands for employment, better livelihood, improved living conditions etc.) in an oppositional manner. This is more so evident in the current phase of neoliberal times in which we live. This oppositional relationship many a times does not appear as such (i.e., as opposed to each other), especially when the economy is booming and the pretence of everyone being happy and committed to the expansion of capital dominates the imagination. In such a situation, the need is to establish that the relationship between state and education extends beyond the institutional framework provided by the system. Education, unlike its reified image, moves beyond the schools, prescribed curriculum and the teaching-learning transaction within the school. While the significance of the formal structures remain as relevant as ever but they are understood in a framework that relates them to and treats them as an intrinsic component of the larger system. In other words, education gets fused into the notion of knowledge production, which is constituted by numerous aligned elements. The idea of knowing becomes the dominant paradigm and teaching and learning (which always keep on switching their positions and functions for one another) emerge out of a process which is characterised by conflict, transformations and efforts to survive on the part of the larger mass. Being part of a process entails that the knowledge production in a society though determined by the Ideological State Apparatuses is also constituted by the other sources – such as movements, acts of resistance, and different types of anti-systemic impulses. However, from this process different kinds of knowledge will be produced – in many cases quite contrary and opposed to each other. Hence, the need for addressing the system and the need to emphasise the relevance of dialectics as a method of understanding education as embedded in the system arises. The system, capitalist mode of production in this case, needs to survive and expand. And there are definite ways in which it sustains and expands itself. “…in order to exist, every social formation must reproduce the conditions of its production at the same time as it produces, and in order to be able to produce it must therefore reproduce: (1) the productive forces, and (2) the existing relations of production” (Althusser, 2006, p. 86). It is essential that the labour power is reproduced for sustenance and expansion of capitalism, and it’s reproduced through the provision of “material means with which to reproduce itself: by wages” (ibid, p.87). However, it is essential that along with reproduction the labour is competent as well. Hence, the issue of skills, posts, jobs etc., become important. Althusser would argue that this is taken care of by the processes outside the production, i.e., through the education system. The educational system becomes a part of consensus creation to generate support for the politics of capital and also nurtures new ideas that would expand the rule of capital. While it teaches the ‘know-how’ (techniques and knowledge), it also teaches children rules of good behaviour, attitudes towards things, rules of morality etc. Within this framework when one situates the processes of knowledge production significant changes have taken place due to liberalisation of economies across world and more so with the onslaught of what we term the neoliberal regime. Changes within culture, within institutions as well as outside the institutions have taken place. Educational institutions have become sites of producing skilled labour force, in a never before manner. Global discourse has been insisting on vocationalisation of education so that students can become part of the labour force as early as possible and this also allows, simultaneously, weakening of the critical education possibilities. To think of education as a tool that enables one to transcend the limits of appearances and allows them to delve deeper into the reality would demand that it (education) be seen as a process of resistance, fostering a sense of dissent and dialogicity within the students. However, contemporary regime does not allow that. Education rather becomes a method of control, a tool of disciplining and a scheme of consensus building that would facilitate the reproduction of the system.

#### Collapse doesn’t cause war

Clary 15 – Christopher Clary, former International Affairs Fellow in India at the Council on Foreign Relations, Postdoctoral Fellow at the Watson Institute at Brown University, Adjunct Staff Member @ RAND Corporation, Security Studies Program @ MIT, country director for South Asian affairs in the Office of the Secretary of Defense, former Research Fellow @ the Harvard Kennedy School's Belfer Center for Science and International Affairs, former research associate in the Department of National Security Affairs at the Naval Postgraduate School, BA from Wichita State University and an MA from the U.S. Naval Postgraduate School, 2015 (“Economic Stress and International Cooperation: Evidence from International Rivalries,” Massachusetts Institute of Technology Political Science Department Research Paper No. 2015-­‐8, “Economic Stress and International Cooperation: Evidence from International Rivalries,” <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2597712>)

Do economic downturns generate pressure for diversionary conflict? Or might downturns encourage austerity and economizing behavior in foreign policy? This paper provides new evidence that economic stress is associated with conciliatory policies between strategic rivals. For states that view each other as military threats, the biggest step possible toward bilateral cooperation is to terminate the rivalry by taking political steps to manage the competition. Drawing on data from 109 distinct rival dyads since 1950, 67 of which terminated, the evidence suggests rivalries were approximately twice as likely to terminate during economic downturns than they were during periods of economic normalcy. This is true controlling for all of the main alternative explanations for peaceful relations between foes (democratic status, nuclear weapons possession, capability imbalance, common enemies, and international systemic changes), as well as many other possible confounding variables. This research questions existing theories claiming that economic downturns are associated with diversionary war, and instead argues that in certain circumstances peace may result from economic troubles. Defining and Measuring Rivalry and Rivalry Termination I define a rivalry as the perception by national elites of two states that the other state possesses conflicting interests and presents a military threat of sufficient severity that future military conflict is likely. Rivalry termination is the transition from a state of rivalry to one where conflicts of interest are not viewed as being so severe as to provoke interstate conflict and/or where a mutual recognition of the imbalance in military capabilities makes conflict-causing bargaining failures unlikely. In other words, rivalries terminate when the elites assess that the risks of military conflict between rivals has been reduced dramatically. This definition draws on a growing quantitative literature most closely associated with the research programs of William Thompson, J. Joseph Hewitt, and James P. Klein, Gary Goertz, and Paul F. Diehl.1 My definition conforms to that of William Thompson. In work with Karen Rasler, they define rivalries as situations in which “[b]oth actors view each other as a significant politicalmilitary threat and, therefore, an enemy.”2 In other work, Thompson writing with Michael Colaresi, explains further: The presumption is that decisionmakers explicitly identify who they think are their foreign enemies. They orient their military preparations and foreign policies toward meeting their threats. They assure their constituents that they will not let their adversaries take advantage. Usually, these activities are done in public. Hence, we should be able to follow the explicit cues in decisionmaker utterances and writings, as well as in the descriptive political histories written about the foreign policies of specific countries.3 Drawing from available records and histories, Thompson and David Dreyer have generated a universe of strategic rivalries from 1494 to 2010 that serves as the basis for this project’s empirical analysis.4 This project measures rivalry termination as occurring on the last year that Thompson and Dreyer record the existence of a rivalry.5 Why Might Economic Crisis Cause Rivalry Termination? Economic crises lead to conciliatory behavior through five primary channels. (1) Economic crises lead to austerity pressures, which in turn incent leaders to search for ways to cut defense expenditures. (2) Economic crises also encourage strategic reassessment, so that leaders can argue to their peers and their publics that defense spending can be arrested without endangering the state. This can lead to threat deflation, where elites attempt to downplay the seriousness of the threat posed by a former rival. (3) If a state faces multiple threats, economic crises provoke elites to consider threat prioritization, a process that is postponed during periods of economic normalcy. (4) Economic crises increase the political and economic benefit from international economic cooperation. Leaders seek foreign aid, enhanced trade, and increased investment from abroad during periods of economic trouble. This search is made easier if tensions are reduced with historic rivals. (5) Finally, during crises, elites are more prone to select leaders who are perceived as capable of resolving economic difficulties, permitting the emergence of leaders who hold heterodox foreign policy views. Collectively, these mechanisms make it much more likely that a leader will prefer conciliatory policies compared to during periods of economic normalcy. This section reviews this causal logic in greater detail, while also providing historical examples that these mechanisms recur in practice.

#### Globalization causes war

Irandoust 17 Manuchehr Irandoust 17, Department of Economics and Finance, School of Business Studies, Kristianstad University, “Militarism and globalization: Is there an empirical link?” Quality and quantity, June 16, 2017, Springer Open Access

[GLOB = globalization index, MIS = militarized spending]

The results of the bootstrap panel Granger causality test are shown in Table 2. The findings show that GLOB and MIS are causally related in most of the countries under review. There is a bi-directional causality in UK, US, Saudi Arabia, and Russia. The causality is unidirectional running from GLOB to MIS in Australia, Brazil, India, and China, and running from MIS to GLOB in Turkey. The degree of significance level varies from country to country. There is no any causal relationship between military spending and globalization in France, Italy, South Korea, Germany, and Japan. Overall, this evidence shows a relatively robust association between changes in globalization and changes in military expenditure. In other words, countries experiencing greater globalization have relatively large increases in militarization over the past 20 years.

However, it has been shown that globalization may not lead to more peaceful relations or demilitarization. As we discussed in Sect. 2, bilateral trade increases the opportunity cost of bilateral war and may hinder bilateral war. Globalization (equivalent to multilateral economic openness) reduces this opportunity cost with any given country and devitalize the incentive to make concessions during negotiations, and, therefore, increases the probability of war between any given pair of country. Thus, an increase in trade or openness between two countries may restore peace between those but may increase the probability of conflict with third countries.

6 Conclusion

While previous studies mostly focused on the causal nexus between military expenditure and economic growth, those studies have not considered the role of globalization. This study uses data from the top 15 military expenditure spenders over the period 1990–2012 to examine the relationship between militarism and globalization. The bootstrap panel Granger causality that accounts for both cross-sectional dependence and heterogeneity across countries is utilized to detect the direction of causality. The results show that military expenditures and globalization are causally related in most of the countries under review. Despite the increasing role of globalization, the results show that military expenditures are growing and pointing to a strengthening in nationalist sentiments and militarism. This paper suggests that changes in domestic political and economic conditions might hinder the process of globalization. The results are consistent with those of Acemoglu and Yared (2010) who conclude that high military spending endangers globalization. This study also supports the results of Martin et al. (2008) who find that an increase in multilateral trade raises the chance of conflict between states. The policy implication of the findings is that greater military spending by a country increases the likelihood of military conflict in the future, the anticipation of which discourages globalization.

### Nuke war D

#### Rigorous climate simulations prove that hydrophilic black carbon would cause atmospheric precipitation – results in a rainout effect that quickly reverses nuclear cooling

Reisner et al. 18 (Jon Reisner – Climate and atmospheric scientist at the Los Alamos National Laboratory. Gennaro D’Angelo – Climate scientist at the Los Alamos National Laboratory, Research scientist at the SETI institute, Associate specialist at the University of California, Santa Cruz, NASA Postdoctoral Fellow at the NASA Ames Research Center, UKAFF Fellow at the University of Exeter. Eunmo Koo - Scientist at Applied Terrestrial, Energy, and Atmospheric Modeling (ATEAM) Team, in Computational Earth Science Group (EES-16) in Earth and Environmental Sciences Division and Co-Lead of Parallel Computing Summer Research Internship (PCSRI) program at the Los Alamos National Laboratory, former Staff research associate at UC Berkeley. Wesley Even - Computational scientist in the Computational Physics and Methods Group at Los Alamos National Laboratory. Matthew Hecht – Atmospheric scientist at the Los Alamos National Laboratory. Elizabeth Hunke - Lead developer for the Los Alamos Sea Ice Model (CICE) at the Los Alamos National Laboratory responsible for development and incorporation of new parameterizations, model testing and validation, computational performance, documentation, and consultation with external model users on all aspects of sea ice modeling, including interfacing with global climate and earth system models. Darin Comeau – Climate scientist at the Los Alamos National Laboratory. Randy Bos - Project leader at the Los Alamos National Laboratory, former Weapons Effects program manager at Tech-Source. James Cooley – Computational scientist at the Los Alamos National Laboratory specializing in weapons physics, emergency response, and computational physics. <MKIM> “Climate impact of a regional nuclear weapons exchange:An improved assessment based on detailed source calculations”. 3/16/18. DOA: 7/13/19. <https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2017JD027331>)

\*BC = Black Carbon

The no-rubble simulation produces a significantly more intense fire, with more fire spread, and consequently a significantly stronger plume with larger amounts of BC reaching into the upper atmosphere than the simulation with rubble, illustrated in Figure 5. While the no-rubble simulation **represents the worst-case scenario** involving vigorous fire activity, **only a relatively small amount of carbon makes its way into the stratosphere** during the course of the simulation. But while small compared to the surface BC mass, stratospheric BC amounts from the current simulations are significantly higher than what would be expected from burning vegetation such as trees (Heilman et al., 2014), e.g., the higher energy density of the building fuels and the initial fluence from the weapon produce an intense response within HIGRAD with initial updrafts of order 100 m/s in the lower troposphere. Or, in comparison to a mass fire, wildfires will burn only a small amount of fuel in the corresponding time period (roughly 10 minutes) that a nuclear weapon fluence can effectively ignite a large area of fuel producing an impressive atmospheric response. Figure 6 shows vertical profiles of BC multiplied by 100 (number of cities involved in the exchange) from the two simulations. The total amount of BC produced is in line with previous estimates (about 3.69 Tg from no-rubble simulation); however, the majority of BC resides **below the stratosphere** (3.46 Tg below 12 km) and can be **readily impacted by scavenging from precipitation** either via pyro-cumulonimbus produced by the fire itself (not modeled) or other synoptic weather systems. While the impact on climate of these more realistic profiles will be explored in the next section, it should be mentioned that **these estimates are** still **at the high end**, considering the inherent simplifications in the combustion model that lead to **overestimating BC production**. 3.3 Climate Results Long-term climatic effects critically depend on the initial injection height of the soot, with larger quantities reaching the upper troposphere/lower stratosphere inducing a greater cooling impact because of longer residence times (Robock et al., 2007a). Absorption of solar radiation by the BC aerosol and its subsequent radiative cooling tends to heat the surrounding air, driving an initial upward diffusion of the soot plumes, an effect that depends on the initial aerosol concentrations. **Mixing and sedimentation** tend to **reduce this process**, and low altitude emissions are also significantly impacted by precipitation if aging of the BC aerosol occurs on sufficiently rapid timescales. But once at stratospheric altitudes, aerosol dilution via coagulation is hindered by low particulate concentrations (e.g., Robock et al., 2007a) and lofting to much higher altitudes is inhibited by gravitational settling in the low-density air (Stenke et al., 2013), resulting in more stable BC concentrations over long times. Of the initial BC mass released in the atmosphere, most of which is emitted below 9 km, **70% rains out within the first month** and 78%, or about 2.9 Tg, is removed within the first two months (Figure 7, solid line), with the remainder (about 0.8 Tg, dashed line) being transported above about 12 km (200 hPa) within the first week. This outcome differs from the findings of, e.g., Stenke et al. (2013, their high BC-load cases) and Mills et al. (2014), who found that most of the BC mass (between 60 and 70%) is lifted in the stratosphere within the first couple of weeks. This can also be seen in Figure 8 (red lines) and in Figure 9, which include results from our calculation with the initial BC distribution from Mills et al. (2014). In that case, only 30% of the initial BC mass rains out in the troposphere during the first two weeks after the exchange, with the remainder rising to the stratosphere. In the study of Mills et al. (2008) this percentage is somewhat smaller, about 20%, and smaller still in the experiments of Robock et al. (2007a) in which the soot is initially emitted in the upper troposphere or higher. In Figure 7, the e-folding timescale for the removal of tropospheric soot, here interpreted as the time required for an initial drop of a factor e, is about one week. This result compares favorably with the “LT” experiment of Robock et al. (2007a), considering 5 Tg of BC released in the lower troposphere, in which 50% of the aerosols are removed within two weeks. By contrast, the initial e-folding timescale for the removal of stratospheric soot in Figure 8 is about 4.2 years (blue solid line), compared to about 8.4 years for the calculation using Mills et al. (2014) initial BC emission (red solid line). The removal timescale from our forced ensemble simulations is close to those obtained by Mills et al. (2008) in their 1 Tg experiment, by Robock et al. (2007a) in their experiment “UT 1 Tg”, and © 2018 American Geophysical Union. All rights reserved. by Stenke et al. (2013) in their experiment “Exp1”, in all of which 1 Tg of soot was emitted in the atmosphere in the aftermath of the exchange. Notably, the e-folding timescale for the decline of the BC mass in Figure 8 (blue solid line) is also close to the value of about 4 years quoted by Pausata et al. (2016) for their long-term “intermediate” scenario. In that scenario, which is also based on 5 Tg of soot initially distributed as in Mills et al. (2014), the factor-of2 shorter residence time of the aerosols is caused by particle growth via coagulation of BC with organic carbon. Figure 9 shows the BC mass-mixing ratio, horizontally averaged over the globe, as a function of atmospheric pressure (height) and time. The BC distributions used in our simulations imply that the upward transport of particles is substantially less efficient compared to the case in which 5 Tg of BC is directly injected into the upper troposphere. The semiannual cycle of lofting and sinking of the aerosols is associated with atmospheric heating and cooling during the solstice in each hemisphere (Robock et al., 2007a). During the first year, the oscillation amplitude in our forced ensemble simulations is particularly large during the summer solstice, compared to that during the winter solstice (see bottom panel of Figure 9), because of the higher soot concentrations in the Northern Hemisphere, as can be seen in Figure 11 (see also left panel of Figure 12). Comparing the top and bottom panels of Figure 9, the BC reaches the highest altitudes during the first year in both cases, but the concentrations at 0.1 hPa in the top panel can be 200 times as large. Qualitatively, the difference can be understood in terms of the air temperature increase caused by BC radiation emission, which is several tens of kelvin degrees in the simulations of Robock et al. (2007a, see their Figure 4), Mills et al. (2008, see their Figure 5), Stenke et al. (2013, see high-load cases in their Figure 4), Mills et al. (2014, see their Figure 7), and Pausata et al. (2016, see one-day emission cases in their Figure 1), due to high BC concentrations, but it amounts to only about 10 K in our forced ensemble simulations, as illustrated in Figure 10. Results similar to those presented in Figure 10 were obtained from the experiment “Exp1” performed by Stenke et al. (2013, see their Figure 4). **In that scenario as well, somewhat less that 1 Tg of BC remained in the atmosphere after the initial rainout**. As mentioned before, the BC aerosol that remains in the atmosphere, lifted to stratospheric heights by the rising soot plumes, undergoes sedimentation over a timescale of several years (Figures 8 and 9). This mass represents the effective amount of BC that can force climatic changes over multi-year timescales. In the forced ensemble simulations, it is about 0.8 Tg after the initial rainout, whereas it is about 3.4 Tg in the simulation with an initial soot distribution as in Mills et al. (2014). Our more realistic source simulation involves the worstcase assumption of no-rubble (along with other assumptions) and hence serves as an upper bound for the impact on climate. As mentioned above and further discussed below, our scenario induces perturbations on the climate system similar to those found in previous studies in which the climatic response was driven by roughly 1 Tg of soot rising to stratospheric heights following the exchange. Figure 11 illustrates the vertically integrated mass-mixing ratio of BC over the globe, at various times after the exchange for the simulation using the initial BC distribution of Mills et al. (2014, upper panels) and as an average from the forced ensemble members (lower panels). All simulations predict enhanced concentrations at high latitudes during the first year after the exchange. In the cases shown in the top panels, however, these high concentrations persist for several years (see also Figure 1 of Mills et al., 2014), whereas the forced ensemble simulations indicate that the BC concentration starts to decline after the first year. In fact, in the simulation represented in the top panels, mass-mixing ratios larger than about 1 kg of BC © 2018 American Geophysical Union. All rights reserved. per Tg of air persist for well over 10 years after the exchange, whereas they only last for 3 years in our forced simulations (compare top and middle panels of Figure 9). After the first year, values drop below 3 kg BC/Tg air, whereas it takes about 8 years to reach these values in the simulation in the top panels (see also Robock et al., 2007a). Over crop-producing, midlatitude regions in the Northern Hemisphere, the BC loading is reduced from more than 0.8 kg BC/Tg air in the simulation in the top panels to 0.2-0.4 kg BC/Tg air in our forced simulations (see middle and right panels). The more rapid clearing of the atmosphere in the forced ensemble is also signaled by the soot optical depth in the visible radiation spectrum, which drops below values of 0.03 toward the second half of the first year at mid latitudes in the Northern Hemisphere, and everywhere on the globe after about 2.5 years (without never attaining this value in the Southern Hemisphere). In contrast, the soot optical depth in the calculation shown in the top panels of Figure 11 becomes smaller than 0.03 everywhere only after about 10 years. The two cases show a similar tendency, in that the BC optical depth is typically lower between latitudes 30º S-30º N than it is at other latitudes. This behavior is associated to the persistence of stratospheric soot toward high-latitudes and the Arctic/Antarctic regions, as illustrated by the zonally-averaged, column-integrated mass-mixing ratio of the BC in Figure 12 for both the forced ensemble simulations (left panel) and the simulation with an initial 5 Tg BC emission in the upper troposphere (right panel). The spread in the globally averaged (near) surface temperature of the atmosphere, from the control (left panel) and forced (right panel) ensembles, is displayed in Figure 13. For each month, the plots show the largest variations (i.e., maximum and minimum values), within each ensemble of values obtained for that month, relative to the mean value of that month. The plot also shows yearly-averaged data (thinner lines). The spread is comparable in the control and forced ensembles, with average values calculated over the 33-years run length of 0.4-0.5 K. This spread is also similar to the internal variability of the globally averaged surface temperature quoted for the NCAR Large Ensemble Community Project (Kay et al., 2015). These results imply that surface air temperature differences, between forced and control simulations, which lie within the spread may not be distinguished from effects due to internal variability of the two simulation ensembles. Figure 14 shows the difference in the globally averaged surface temperature of the atmosphere (top panel), net solar radiation flux at surface (middle panel), and precipitation rate (bottom panel), computed as the (forced minus control) difference in ensemble mean values. The sum of standard deviations from each ensemble is shaded. Differences are qualitatively significant over the first few years, when the anomalies lie near or outside the total standard deviation. Inside the shaded region, differences may not be distinguished from those arising from the internal variability of one or both ensembles. The surface solar flux (middle panel) is the quantity that appears most affected by the BC emission, with qualitatively significant differences persisting for about 5 years. The precipitation rate (bottom panel) is instead affected only at the very beginning of the simulations. The red lines in all panels show the results from the simulation applying the initial BC distribution of Mills et al. (2014), where the period of significant impact is much longer owing to the higher altitude of the initial soot distribution that results in longer residence times of the BC aerosol in the atmosphere. When yearly averages of the same quantities are performed over the IndiaPakistan region, the differences in ensemble mean values lie within the total standard deviations of the two ensembles. The results in Figure 14 can also be compared to the outcomes of other previous studies. In their experiment “UT 1 Tg”, Robock et al. (2007a) found that, when only 1 Tg of soot © 2018 American Geophysical Union. All rights reserved. remains in the atmosphere after the initial rainout, temperature and precipitation anomalies are about 20% of those obtained from their standard 5 Tg BC emission case. Therefore, the largest differences they observed, during the first few years after the exchange, were about - 0.3 K and -0.06 mm/day, respectively, comparable to the anomalies in the top and bottom panels of Figure 14. Their standard 5 Tg emission case resulted in a solar radiation flux anomaly at surface of -12 W/m2 after the second year (see their Figure 3), between 5 and 6 time as large as the corresponding anomalies from our ensembles shown in the middle panel. In their experiment “Exp1”, Stenke et al. (2013) reported global mean surface temperature anomalies not exceeding about 0.3 K in magnitude and precipitation anomalies hovering around -0.07 mm/day during the first few years, again consistent with the results of Figure 14. In a recent study, Pausata et al. (2016) considered the effects of an admixture of BC and organic carbon aerosols, both of which would be emitted in the atmosphere in the aftermath of a nuclear exchange. In particular, they concentrated on the effects of coagulation of these aerosol species and examined their climatic impacts. The initial BC distribution was as in Mills et al. (2014), although the soot burden was released in the atmosphere over time periods of various lengths. Most relevant to our and other previous work are their one-day emission scenarios. They found that, during the first year, the largest values of the atmospheric surface temperature anomalies ranged between about -0.5 and -1.3 K, those of the sea surface temperature anomalies ranged between -0.2 and -0.55 K, and those of the precipitation anomalies varied between -0.15 and -0.2 mm/day. All these ranges are compatible with our results shown in Figure 14 as red lines and with those of Mills et al. (2014, see their Figures 3 and 6). As already mentioned in Section 2.3, the net solar flux anomalies at surface are also consistent. This overall agreement suggests that the **inclusion of organic carbon aerosols, and** ensuing **coagulation** with BC, **should not dramatically alter the climatic effects** resulting from our forced ensemble simulations. Moreover, aerosol growth would likely **shorten the residence time of the BC particulate in the atmosphere** (Pausata et al., 2016), possibly **reducing the duration of these effects.**

### Disease turns/D

#### Economic growth causes global disease spread—turns advantage 1.

Tong Wu et al, 2017. Tong Wu (1), Charles Perrings (2), Ann Kinzig (3, 4), James P. Collins (5), Ben A. Minteer (6), Peter Daszak (7). 1. School of Life Sciences, Arizona State University, Tempe, USA 2. School of Life Sciences, Arizona State University, Tempe, USA 3. School of Life Sciences, Arizona State University, Tempe, USA 4.Global Institute of Sustainability, Arizona State University, Tempe, USA 5. School of Life Sciences, Arizona State University, Tempe, USA 6. School of Life Sciences, Arizona State University, Tempe, USA 7. EcoHealth Alliance, New York, USA. Ambio February 2017, Volume 46, Issue 1, pp 18–29. “Economic growth, urbanization, globalization, and the risks of emerging infectious diseases in China: A review” [https://doi.org/10.1007/s13280-016-0809-2 Accessed 7/11/18](https://doi.org/10.1007/s13280-016-0809-2%20Accessed%207/11/18) //WR-NCP

Today, an increasingly urban and interconnected world faces growing threats from emerging infectious diseases (McMichael 2004; Kapan et al. 2006; Bradley and Altizer 2007). This is of particular concern in the developing world, where managing fast-spreading epidemics in the growing number of megacities is a pressing challenge (Rees 2013). Recent epidemics have underscored the importance of linkages between host habitats and the global network of cities. The Ebola virus, for example, has long survived among wildlife reservoirs in the hinterlands of Africa, ‘‘breaking out’’ in towns and cities in conspicuous but otherwise local epidemics. As in earlier outbreaks, the 2014 epidemic is thought to have origins in the consumption of wild animal protein, while its spread occurred in densely populated African cities. The international threat it posed stemmed from the increasing air travel connections between these and other cities around the world. In the case of arboviruses like Zika, dengue, chikungunya, West Nile, and malaria, whose vectors have found ready habitat in urban areas, the primary mechanism for the spread of disease from one city to the next is international trade and travel (Hay et al. 2005; Tatem et al. 2006; Alirol et al. 2011; Weaver 2013; Kraemer et al. 2015). The same is true of coronaviruses such as Severe Acute Respiratory Syndrome (SARS) and Middle Eastern Respiratory Syndrome (MERS). The latter emerged in Saudi Arabia in 2012, having been transmitted between animal reservoirs such as camels and their human handlers. It has since spread throughout the surrounding region, and travel-related human infections have been recorded in Europe, North America, and East and Southeast Asia (Parlak 2015; Zumla et al. 2015). Urbanization and globalization have made outbreaks of these diverse zoonoses difficult to control, even with unprecedented levels of international cooperation (Khan et al. 2013; Weaver 2013; Chan 2014; Kraemer et al. 2015). For most emerging infectious diseases, prevention is better than cure—ex ante mitigation of disease risk is more economically efficient than ex post adaptation to an outbreak (Murphy 1999; Graham et al. 2008; Voyles et al. 2014; Langwig et al. 2015). Among mitigation strategies, vaccination has been a widespread and long-established practice for many DNA viruses such as chicken pox or small pox. However, vaccination remains problematic for most RNA viruses, including Ebola, SARS, and avian influenza, due to their higher mutation rate; vaccination is simply not a feasible way to prevent the emergence of many novel zoonoses, which will inevitably encounter immunologically naïve populations. Therefore, mitigating the risks from emerging and reemerging zoonoses requires preemptive measures against their socioecological drivers (Pike et al. 2014). Identifying areas where the convergence of risk factors is occurring with greatest intensity, and at the largest scales, is a logical first step in the development of a mitigation strategy. In this regard, China may be an important outlier among countries. Assessment of the risks posed by zoonotic diseases requires an understanding of how socioeconomic, and ecological conditions affect two phenomena: emergence (the irruption of a pathogen originating in wildlife or livestock into human populations) and spread (the transmission of disease among both animals and people). In this article, we review the evidence for changes in zoonotic risks in China. More particularly, we show how income growth, urbanization, and globalization affect the likelihood of emergence and spread, using SARS and avian influenza as topical and representative examples, but also referring to other diseases when relevant. We discuss the policy implications of changes in the epidemiological environment in China, and consider how the mitigation of zoonotic risk in China could benefit the global risk environment.

#### No disease impact - Disease can’t cause extinction

Dr. Toby Ord 20, Senior Research Fellow in Philosophy at Oxford University, DPhil in Philosophy from the University of Oxford, The Precipice: Existential Risk and the Future of Humanity, Hachette Books, Kindle Edition, p. 124-126

Are we safe now from events like this? Or are we more vulnerable? Could a pandemic threaten humanity’s future?10

The Black Death was not the only biological disaster to scar human history. It was not even the only great bubonic plague. In 541 CE the Plague of Justinian struck the Byzantine Empire. Over three years it took the lives of roughly 3 percent of the world’s people.11

When Europeans reached the Americas in 1492, the two populations exposed each other to completely novel diseases. Over thousands of years each population had built up resistance to their own set of diseases, but were extremely susceptible to the others. The American peoples got by far the worse end of exchange, through diseases such as measles, influenza and especially smallpox.

During the next hundred years a combination of invasion and disease took an immense toll—one whose scale may never be known, due to great uncertainty about the size of the pre-existing population. We can’t rule out the loss of more than 90 percent of the population of the Americas during that century, though the number could also be much lower.12 And it is very difficult to tease out how much of this should be attributed to war and occupation, rather than disease. As a rough upper bound, the Columbian exchange may have killed as many as 10 percent of the world’s people.13

Centuries later, the world had become so interconnected that a truly global pandemic was possible. Near the end of the First World War, a devastating strain of influenza (known as the 1918 flu or Spanish Flu) spread to six continents, and even remote Pacific islands. At least a third of the world’s population were infected and 3 to 6 percent were killed.14 This death toll outstripped that of the First World War, and possibly both World Wars combined.

Yet even events like these fall short of being a threat to humanity’s longterm potential.15

[FOONOTE]

In addition to this historical evidence, there are some deeper biological observations and theories suggesting that pathogens are unlikely to lead to the extinction of their hosts. These include the empirical anti-correlation between infectiousness and lethality, the extreme rarity of diseases that kill more than 75% of those infected, the observed tendency of pandemics to become less virulent as they progress and the theory of optimal virulence. However, there is no watertight case against pathogens leading to the extinction of their hosts.

[END FOOTNOTE]

In the great bubonic plagues we saw civilization in the affected areas falter, but recover. The regional 25 to 50 percent death rate was not enough to precipitate a continent-wide collapse of civilization. It changed the relative fortunes of empires, and may have altered the course of history substantially, but if anything, it gives us reason to believe that human civilization is likely to make it through future events with similar death rates, even if they were global in scale.

The 1918 flu pandemic was remarkable in having very little apparent effect on the world’s development despite its global reach. It looks like it was lost in the wake of the First World War, which despite a smaller death toll, seems to have had a much larger effect on the course of history.16

It is less clear what lesson to draw from the Columbian exchange due to our lack of good records and its mix of causes. Pandemics were clearly a part of what led to a regional collapse of civilization, but we don’t know whether this would have occurred had it not been for the accompanying violence and imperial rule. The strongest case against existential risk from natural pandemics is the fossil record argument from Chapter 3. Extinction risk from natural causes above 0.1 percent per century is incompatible with the evidence of how long humanity and similar species have lasted. But this argument only works where the risk to humanity now is similar or lower than the longterm levels. For most risks this is clearly true, but not for pandemics. We have done many things to exacerbate the risk: some that could make pandemics more likely to occur, and some that could increase their damage. Thus even “natural” pandemics should be seen as a partly anthropogenic risk.

### Water wars turns

#### Growth depletes water resources – recent studies

Distefano and Kelly ’17 – PhD student at IMT Institute for Advanced Studies // researcher at Cambridge Centre for Climate Change Mitigation Research (Tiziano and Scott, “Are we in deep water? Water scarcity and its limits to economic growth,” [Ecological Economics](https://www.sciencedirect.com/science/journal/09218009) [Volume 142](https://www.sciencedirect.com/science/journal/09218009/142/supp/C), December 2017, Pages 130-147 , https://www-sciencedirect-com.proxy.lib.umich.edu/science/article/pii/S0921800916310795)//PS

In this paper we develop numerical simulations to assess the economic implications of [water scarcity](https://www-sciencedirect-com.proxy.lib.umich.edu/topics/earth-and-planetary-sciences/water-scarcity) under [climate change](https://www-sciencedirect-com.proxy.lib.umich.edu/topics/earth-and-planetary-sciences/climate-change). Four different climate scenarios (SSPs) are compared in order to assess the consequences of OECD GDP growth forecasts, climate change, and technological progress. We show that the factors that determine the sign and magnitude of [water-stress](https://www-sciencedirect-com.proxy.lib.umich.edu/topics/earth-and-planetary-sciences/water-stress) response varies by region and stage of economic development. Water scarcity, brought about by climate change is a global issue with potential to cause economic loss and disruption. The recently developed IPCC scenarios for economic development (the SSPs), as proposed by the IPCC, have largely ignored the impact of [water availability](https://www-sciencedirect-com.proxy.lib.umich.edu/topics/earth-and-planetary-sciences/water-availability) constraints on economic growth. The projected **economic growth would imply an over-exploitation of renewable freshwater, even when substantial improvements in water efficiency** (γ) **are envisaged**. Our analysis shows that the baseline SSP growth scenarios need to be updated to be consistent with known water limits, and to be compatible with the future water availability and climate change. Three key messages can be drawn from the current study. First, the effects of climate change on water scarcity are most pronounced for Australia, Spain, France, Mexico, and Brazil. In line with the latest report from MIT on global water stress ([Schlosser, 2014](https://www-sciencedirect-com.proxy.lib.umich.edu/science/article/pii/S0921800916310795" \l "bb0200)), we find that countries already experiencing water stress will be the most impacted in the future under the combined effects of socio-economic shifts and climate change. This is particularly true for India. However, the overall impact of climate change seem **negligible once compared with those coming from economic activity**. Water-stress is dominated by socio-economic variables with climate change acting to exacerbate water stress even further. Second, our outcomes suggest that water remains a significant obstacle to growth in both developed and developing countries, in the context of climate change. China and India must deal with severe and imminent water shortage problems, to which they are not able to pursue economic growth without over-exploiting [non-renewable resources](https://www-sciencedirect-com.proxy.lib.umich.edu/topics/earth-and-planetary-sciences/nonrenewable-resources) or relying on international trade. The same is true for most advanced economies, although this occurs later in time (around 2050). This is true even for water abundant countries, such as Russia, Canada, and Brazil, under the business as usual scenario (SSP5). A possible alternative to these pessimistic scenarios is to boost technological progress via investment in water efficiency (γ). Large investments in R&D towards greater water efficiency can be sufficient, in some cases (e.g., China, Mexico, and Turkey) to offset the [water consumption](https://www-sciencedirect-com.proxy.lib.umich.edu/topics/earth-and-planetary-sciences/water-consumption) due to economic growth. In other cases - such as India, the USA, and some European countries (e.g., Italy, France, UK, and Spain) - the expected technological improvements in water efficiency is far greater than historical trends and unlikely to have the impact required. Another way to prevent these economic losses is to reduce overall demand by decreasing the amount of water that is wasted, modifying [consumption patterns](https://www-sciencedirect-com.proxy.lib.umich.edu/topics/earth-and-planetary-sciences/consumption-pattern) towards less water-intensive products or increasing trade in [virtual water](https://www-sciencedirect-com.proxy.lib.umich.edu/topics/agricultural-and-biological-sciences/virtual-water). Third, an increase in virtual water trade provides an important opportunity for many countries to escape the worst effects of water stress. The only exception is India which mostly suffers from increasing population size paired with low levels of [technological development](https://www-sciencedirect-com.proxy.lib.umich.edu/topics/earth-and-planetary-sciences/technological-development). To the best of the authors knowledge, this paper represents the first study where the impact of each factor contributing to water stress is decomposed. We isolate and quantify the impact of each driver, showing that the most important driver of water scarcity is GDP growth which greatly overcomes any expected [water saving](https://www-sciencedirect-com.proxy.lib.umich.edu/topics/earth-and-planetary-sciences/water-saving) due to technological progress, in most of countries and scenarios. The uncertainty of regional climate change seem to play a secondary role that acts to exacerbate the effects of water scarcity on nations, particularly those that are already experiencing water stress. This information is crucial for the comparison of alternative policies for investment in water efficiency, international trade agreements, and the promotion of economic growth. Another novelty introduced in this paper is given by the computation of the sectoral impact. Due to heterogeneous production functions, there is no one best solution that can be applied universally; a global agreement on VWT should be paired with local initiatives. Depending on the context, some countries will find it beneficial to be more energy-intensive and to import food (Japan and Sweden) while other countries are already heavily dependent on foreign food (China and India among others) and thus they need to find the best combination of alternative virtual water uses. In particular, China and India would benefit from cleaning up their production processes and thus decreasing grey water pollution. New technologies are fundamental for improving efficiency and ensuring better quality of water. Our research sheds light on the complex evolution of water-climate-economic systems, and in particular under severe water constraints. Though based on simple linear algebra this IO model is able to ascertain non-linear trends in model variables (VWT, social and physical water scarcity) suggesting that it is a useful tool to frame future environmental policies and manage scarce [water resources](https://www-sciencedirect-com.proxy.lib.umich.edu/topics/earth-and-planetary-sciences/water-resource). This paper offers the possibility to ground a broad political debate for wise water governance, helping policy makers to understand the long-term consequences of different policy options.

### Transition

#### Transition is possible in a post-coronavirus world—there’s a sea change towards sustainability

Cohen, 20

(Maurie, PhD from the University of Pennsylvania, Professor of Sustainability Studies at the New Jersey Institute of Technology, Editor of Sustainability: Science, Practice, and Policy, Associate Editor of Environmental Innovation and Sustainability Transitions, and co-coordinator of the Future Earth Knowledge-Action Network on Systems of Sustainable Consumption and Production, “Does the COVID-19 outbreak mark the onset of a sustainable consumption transition?,” Sustainability: Science, Practice and Policy Vol 16 No 1 pg 1-3 NL)

For nearly 30 years, since the United Nations Conference on Environment and Development in Rio de Janeiro in 1992, sustainability proponents have sought in various ways to foster a “sustainable consumption transition.” For instance, Chapter Four of Agenda 21 forthrightly observes that “[w]hile poverty results in certain kinds of environmental stress, the major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialized countries, which is a matter of grave concern, aggravating poverty and imbalances” (United Nation 1992; see also Cohen 2001). During the following decades, numerous governments, multilateral organizations, scientific societies, and others developed carefully detailed plans outlining how to facilitate less resource intensive forms of consumption and to ensure prosperity without transgressing planetary boundaries (Royal Society of London and the United States National Academy of Sciences 1997; Nash 2009; Scholl et al. 2010). For instance, in 1998 the United Nations Development Program described the circumstances of the affluent nations as a “runaway consumption train” (UNDP 1998). Consistent with this characterization, the Nordic Council, the Organization for Economic Co-operation and Development, the European Commission, the Royal Society of London, and the United States National Academy of Sciences highlighted the challenges of designing more sustainable means of consumption and production. More recently, given the close correspondence between consumption practices and greenhouse-gas emissions, the Paris Climate Agreement appropriately recognized, “sustainable patterns of consumption and production … play an important role in addressing climate change” (United Nations 2015; refer also to Alfredsson et al. 2018). The issue of sustainable consumption has evolved on the international policy agenda since the Rio Conference through three loosely demarcated phases. First, the 1990s were largely marked by an emphasis on the promotion of cleaner and more efficient processes for manufacturing consumer goods and their intermediary inputs (Hertwich 2005). Second, during the early 2000s attention shifted to “greener” forms of household provisioning exemplified by strategies devoted to educating consumers, designing eco-labels on product packages, and “nudging” shoppers to make responsible choices (Matthias, Mont, and Heiskanen 2016; Sunstein 2015). Finally, in the years since the onset of the global financial crisis in 2008, we have witnessed growing appreciation of the need for systemic change of the social and institutional arrangements that perpetuate contemporary consumerist lifestyles—in short, to achieve absolute reductions in consumptive throughput (Cohen 2019; Foden et al. 2019; see also Akenji et al. 2016). Against this background, we are now struggling to anticipate the impacts of COVID-19. Major financial markets are gyrating and international supply chains are in turmoil, prompting managers to canvass about to find local sources of fabricated materials to maintain industrial production. Tourism is grinding to a halt as travelers cancel trips, airlines suspend flights, and hotels become increasingly vacant. Sporting events, concerts, theatrical performances, museum exhibitions, and other public showcases are being postponed. Growing numbers of companies are encouraging employees to take time off from work and contemplating the imposition of compelled furloughs. Economic forecasters are warning that gross domestic product for many countries will contract, perhaps very significantly, in coming months. While the present situation is being treated as an emergent economic crisis, it merits acknowledging that sustainability scientists and policy makers have implicitly been seeking to achieve over the past decade broadly similar objectives—albeit with greater political subtlety and awareness for adverse societal consequences—in the form of a sustainable consumption transition (see, e.g. O’Rourke and Lollo 2015; Valentine, Ruwet, and Bauler 2015; Røpke 2015; Welch and Southerton 2018).1 It merits recognizing that COVID-19 is simultaneously a public health emergency and a real-time experiment in downsizing the consumer economy. Social scientists have long recognized that disasters, especially when the scale of their tragic consequences emerges with modest but steady pace, have a tendency to catalyze processes of social change. For instance, the renowned Russian-American sociologist Pitirim Sorokin observed in 1942 that society “is never the same as the one that existed before the calamity. For good or ill, calamities are unquestionably the supreme disruptors and transformers of social organization and institutions” (Sorokin 1942). Although current circumstances pose unique challenges to foretelling the future, it is notable that medical authorities are now making comparisons to the Spanish flu of 1918 and 1919 that internationally resulted in the death of 50 million people (Chen et al. 2020; Lambert 2020). While it is extremely premature to suggest that the current public health emergency will reach this alarming level, political regimes in a number of the most severely affected countries are coming under profound strain due to intensifying anxiety about the coronavirus epidemic. With respect to supply chains, at least some of the stopgap measures being implemented to get through the next few weeks or months will become locked in on a longer-term basis. Consumers are stockpiling nonperishable food and other supplies and public authorities have not disclaimed the eventual need for rationing and other consumption controls. A practical outcome is that we are liable to see customarily face-to face activities move to virtual platforms as users become more acclimated with online interfaces for conducting business, delivering educational programing, and engaging in a widening range of social activities. Experience in China to date suggests that extended periods of quarantine create novel forms of consumer demand as people cope with the exigencies of isolation. The more protracted the threat of contagion proves to be, the further engrained and resistant to reversal these adaptive responses will become. As is frequently the case in the aftermath of disasters, we will quickly forget “how things used to be.” Nonetheless, as soon as circumstances allow, there will be vigorous promotional efforts encouraging us to revert to “normal.” We should expect a relentless stream of inducements from governments and companies encouraging consumers to get out of the house and back on the bandwagon. Central banks are already signaling a willingness to lower interest rates—already in negative territory in some countries—as far as necessary to make this happen. Many individuals are likely, at least initially, to respond positively to these appeals, but we should not be surprised in due course to discover that other predilections have supplanted once-familiar practices. While it may seem both fanciful and insolent, COVID-19 is an opportunity to reduce over the longer term the prevalence of lifestyles premised on large volumes of energy and material throughput. At the same time, imperatives for social distancing to lower the risk of community transmission will regrettably reinforce commitments to individualized rather than public and shared modes of consumption. Despite what appears to be an increasingly dire public health emergency, policy makers should work to ensure that the coronavirus outbreak contributes to a sustainable consumption transition. This would be one way to offset some of the unfortunate suffering and disruption caused by this event.

#### Crisis gets everyone else on board

**Alexander 15**—lecturer at the Office for Environmental Programs, University of Melbourne (Samuel, *Sufficiency Economy* pg 270-272, dml)

In many ways this final ‘pathway’ could be built into all of the previous perspectives, because none of the theorists considered above (especially the DGR camp) would think that the transition to a deep green alternative could ever be smooth, rational, or painless. Even many radical reformers, whose strategy involves working within the institutions of liberal democracy rather than subverting or ignoring them, clearly expect political conflict and economic difficulties to shape the pathway to the desired alternative (Gilding, 2011). Nevertheless, for those who are deeply pessimistic about the likelihood of any of the previous strategies actually giving rise to a deep green alternative (however coherent or well justified they may be), there remains the possibility that some such alternative could arise not by **design** so much as by **disaster**. In other words, it is worth considering whether a crisis situation – or a series of crises – could either (i) **force an alternative way of life** upon us; or (ii) be **the provocation needed** for cultures or politicians to **take radical alternatives seriously**. Those two possibilities will now be considered briefly, in turn.

As industrial civilisation continues its global expansion and pursues growth without apparent limit, the possibility of economic, political, or ecological crises forcing an alternative way of life upon humanity seems to be **growing in likelihood** (Ehrlich and Ehrlich, 2013). That is, if the existing model of global development is not stopped via one of the pathways reviewed above, or some other strategy, then it seems clear enough that at some point in the future, industrial civilisation will **grow itself to death** (Turner, 2012). Whether ‘collapse’ is initiated by an ecological tipping point, a financial breakdown of an overly indebted economy, a geopolitical disruption, an oil crisis, or some confluence of such forces, the possibility of collapse or deep global crisis can no longer be dismissed merely as the intellectual playground for ‘doomsayers’ with curdled imaginations. Collapse is a prospect that ought to be taken seriously based on the logic of limitless growth on a finite planet, as well as the evidence of existing economic, ecological, or more specifically climatic instability. As Paul Gilding (2011) has suggested, perhaps it is already too late to avoid some form of ‘great disruption’.

Could collapse or deep crisis be the most likely pathway to an alternative way of life? If it is, such a scenario must not be idealised or romanticised. Fundamental change through crisis would almost certainly involve great suffering for many, and quite possibly significant population decline through starvation, disease, or war. It is also possible that the ‘alternative system’ that a crisis produces is equally or even more undesirable than the existing system. Nevertheless, it may be that this is **the only way** a post-growth or post-industrial way of life will **ever arise**. The **Cuban oil crisis**, prompted by the collapse of the USSR, provides one such example of a deep societal transition that arose not from a political or social movement, but from sheer force of circumstances (Piercy et al., 2010). Almost overnight Cuba had a large proportion of its oil supply cut off, forcing the nation to move away from oil-dependent, industrialised modes of food production and instead take up local and organic systems – or **perish**. David Holmgren (2013) published a deep and provocative essay, ‘Crash on Demand’, exploring the idea that a relatively small anti-consumerist movement could be enough to destabilise the global economy, which is already struggling. This presents one means of bringing an end to the status quo by inducing a voluntary crisis, without relying on a mass movement. Needless to say, should people adopt such a strategy, it would be imperative to ‘prefigure’ the alternative society as far as possible too, not merely withdraw support from the existing society.

Again, one must not romanticise such theories or transitions. The Cuban crisis, for example, entailed much hardship. But it does **expose the mechanisms** by which crisis can induce **significant societal change** in ways that, in the end, are **not always negative**. In the face of a **global crisis** or **breakdown**, therefore, it could be that elements of the deep green vision (such as organic agriculture, frugal living, sharing, radical recycling, post-oil transportation, etc.) come to be **forced upon humanity**, in which case the question of strategy has **less** to do with **avoiding** a deep crisis or **collapse** (which may be inevitable) and more to do with **negotiating the descent** as wisely as possible. This is hardly a reliable path to the deep green alternative, but it presents itself as a possible path.

Perhaps a more reliable path could be based on the possibility that, rather than imposing an alternative way of life on a society through sudden collapse, a deep crisis could provoke a social or political **revolution in consciousness** that **opens up space** for the deep green vision to be **embraced** and **implemented** as some form of crisis management strategy. Currently, there is **insufficient social** or **political support** for such an alternative, but perhaps a **deep crisis** will **shake the world awake**. Indeed, perhaps that is **the only way** to create the **necessary mindset**. After all, today we are hardly lacking in evidence of the need for radical change (Turner, 2012), suggesting that shock and response may be the form the transition takes, rather than it being induced through orderly, rational planning, whether from ‘top down’ or ‘from below’. Again, this ‘nonideal’ pathway to a post-growth or post-industrial society could be built into the other strategies discussed above, adding some realism to strategies that might otherwise appear too utopian. That is to say, it may be that **only deep crisis** will **create the social support** or **political will needed** for radical reformism, eco-socialism, or ecoanarchism to emerge as social or political movements capable of **rapid transformation**. Furthermore, it would be wise to keep an open and evolving mind regarding the best strategy to adopt, because the relative effectiveness of various strategies may change over time, depending on how forthcoming crises unfold.

### Ocean acid

#### Growth increases ocean acidification

Wei-Hass 18 (Maya, reporter for National Geographic. National Geographic, 6-13-2018. “Trump Just Remade Ocean Policy—Here’s What That Means”) NREM/Lil’ GBN

https://www.nationalgeographic.com/environment/2018/07/news-ocean-policy-indigenous-sustainability-fisheries-industry-economy-marine/

Though much is yet to be seen on the details of the Trump administration's ocean policies, the new EO comes after months of rolling back and loosening environmental regulations and policies, often at the request of industry. An Executive Order President Trump enacted in March of last year called for reduction of “regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation.” It targeted regulations the Obama administration put in place to combat climate change and downplayed dire impacts of carbon emissions. Among other acts, the EO lifted the 2016 freeze on coal leasing on federal lands and kicked off efforts to rescind the EPA's Clean Power Plan. As a result of that order, the Bureau of Safety and Environmental Enforcement overhauled two rules put in place after the Deepwater Horizon disaster to prevent similar spills in the future. In January, following an energy-focused EO, the administration announced plans to open nearly all of the United States coastline for offshore oil and gas drilling. It would make an unprecedented 90 percent of the outer continental shelf available for leasing. Many coastal states, including California, Connecticut, Delaware, Maine, Massachusetts, Maryland, New Jersey, Oregon, and Virginia, immediately protested the move. And now, following the shrinking of Bears Ears and Grand Staircase Escalante national monuments, three marine monuments are under review to potentially be opened for commercial fishing: Pacific Remote Islands, Rose Atoll, and the Northeast Canyons and Seamounts. Just this past June, the U.S. also refused to agree to the G7 Ocean Plastics Charter, dedicated to combating ocean pollution. One study estimated that somewhere between 5.3 million and 14 million tons of plastic poured into the ocean from coastal countries in 2010 alone—and its impacts are deadly. For evidence, look no further than the pilot whale that died from eating more than 17 pounds of plastic. This week, the U.S. House of Representatives passed a bill proposing changes to the Magnuson-Stevens Act, which regulates American fisheries ensuring a sustainable level of marine life removal. If passed, many conservation groups fear the changes will undermine the strong management policies. Looking Toward the Future It is, however, too soon to bemoan the loss of environmental protections from the new EO, Spring says. The order does emphasize support of data in decision making, and some coordination between organizing bodies. And despite the order, the Mid-Atlantic Regional Council has signaled their interest in continuing their work. “I don't sit here without hope that we can continue the good work that we have built and the foundation that we've laid over the past eight years,” says Leonard. But “that's not for tribal nations to determine.” And the litany of unanswered questions is lengthy. As Spring says: “I think what they say is they'll make decisions on science, but what does that mean to them? And how do they interpret that? And whose science? And how is it reviewed?” Under the new EO, agencies have 90 days to review regulations and policies. But until those reports come in, it's still possible for the public to help shape the future of ocean science, Spring emphasizes. Just days after the EO signing, the White House Office of Science and Technology Policy quietly released its draft plan for America's Oceans, laying out the topics the government deems important to allocate money and expert time. Like the EO, security and economics feature prominently, and mentions of “climate change” are absent. But the report does acknowledge the need for “models of the Earth system,” Spring notes.

#### Extinction

Ruiter 17 (Zach, reporter for Now Toronto. Cites a multitude of studies. Now Toronto, 11-22-2017, “Are we headed for near-term human extinction?) NREM/Lil’ GBN

https://nowtoronto.com/news/are-we-headed-for-near-term-human-extinction/

4. Accelerated ocean acidification The world’s oceans are carbon sinks that sequester a third of the carbon dioxide released into the atmosphere. The carbon dioxide emitted in addition to that which is produced naturally has changed the chemistry of seawater. The carbon in the oceans converts into carbonic acid, which lowers pH levels and makes the water acidic. As of 2010, the global population of phytoplankton, the microscopic organisms that form the basis of the ocean’s food web, has fallen by about 40 per cent since 1950. Phytoplankton also absorb carbon dioxide and produce half of the world’s oxygen output. The accelerating loss of ocean biodiversity and continued overfishing may result in a collapse of all species of wild seafood by 2048, according to a 2006 study published in the journal Science.

# 2NR