## 1

#### Interpretation: “medicines” is a generic bare plural. The aff may not defend that member nations of the World Trade Organization ought to reduce intellectual property protections for a medicine or subset of medicines.

Nebel 19. [Jake Nebel is an assistant professor of philosophy at the University of Southern California and executive director of Victory Briefs. He writes a lot of this stuff lol – duh.] “Genericity on the Standardized Tests Resolution.” Vbriefly. August 12, 2019. <https://www.vbriefly.com/2019/08/12/genericity-on-the-standardized-tests-resolution/?fbclid=IwAR0hUkKdDzHWrNeqEVI7m59pwsnmqLl490n4uRLQTe7bWmWDO_avWCNzi14> TG

Both distinctions are important. Generic resolutions can’t be affirmed by specifying particular instances. But, since generics tolerate exceptions, plan-inclusive counterplans (PICs) do not negate generic resolutions.

Bare plurals are typically used to express generic generalizations. But there are two important things to keep in mind. First, generic generalizations are also often expressed via other means (e.g., definite singulars, indefinite singulars, and bare singulars). Second, and more importantly for present purposes, bare plurals can also be used to express existential generalizations. For example, “Birds are singing outside my window” is true just in case there are some birds singing outside my window; it doesn’t require birds in general to be singing outside my window.

So, what about “colleges and universities,” “standardized tests,” and “undergraduate admissions decisions”? Are they generic or existential bare plurals? On other topics I have taken great pains to point out that their bare plurals are generic—because, well, they are. On this topic, though, I think the answer is a bit more nuanced. Let’s see why.

“Colleges and universities” is a generic bare plural. I don’t think this claim should require any argument, when you think about it, but here are a few reasons.

First, ask yourself, honestly, whether the following speech sounds good to you: “Eight colleges and universities—namely, those in the Ivy League—ought not consider standardized tests in undergraduate admissions decisions. Maybe other colleges and universities ought to consider them, but not the Ivies. Therefore, in the United States, colleges and universities ought not consider standardized tests in undergraduate admissions decisions.” That is obviously not a valid argument: the conclusion does not follow. Anyone who sincerely believes that it is valid argument is, to be charitable, deeply confused. But the inference above would be good if “colleges and universities” in the resolution were existential. By way of contrast: “Eight birds are singing outside my window. Maybe lots of birds aren’t singing outside my window, but eight birds are. Therefore, birds are singing outside my window.” Since the bare plural “birds” in the conclusion gets an existential reading, the conclusion follows from the premise that eight birds are singing outside my window: “eight” entails “some.” If the resolution were existential with respect to “colleges and universities,” then the Ivy League argument above would be a valid inference. Since it’s not a valid inference, “colleges and universities” must be a generic bare plural.

Second, “colleges and universities” fails the [upward-entailment test](https://plato.stanford.edu/entries/generics/#IsolGeneInte) for existential uses of bare plurals. Consider the sentence, “Lima beans are on my plate.” This sentence expresses an existential statement that is true just in case there are some lima beans on my plate. One test of this is that it entails the more general sentence, “Beans are on my plate.” Now consider the sentence, “Colleges and universities ought not consider the SAT.” (To isolate “colleges and universities,” I’ve eliminated the other bare plurals in the resolution; it cannot plausibly be generic in the isolated case but existential in the resolution.) This sentence does not entail the more general statement that educational institutions ought not consider the SAT. This shows that “colleges and universities” is generic, because it fails the upward-entailment test for existential bare plurals.

Third, “colleges and universities” fails the adverb of quantification test for existential bare plurals. Consider the sentence, “Dogs are barking outside my window.” This sentence expresses an existential statement that is true just in case there are some dogs barking outside my window. One test of this appeals to the drastic change of meaning caused by inserting any adverb of quantification (e.g., always, sometimes, generally, often, seldom, never, ever). You cannot add any such adverb into the sentence without drastically changing its meaning. To apply this test to the resolution, let’s again isolate the bare plural subject: “Colleges and universities ought not consider the SAT.” Adding generally (“Colleges and universitiesz generally ought not consider the SAT”) or ever (“Colleges and universities ought not ever consider the SAT”) result in comparatively minor changes of meaning. (Note that this test doesn’t require there to be no change of meaning and doesn’t have to work for every adverb of quantification.) This strongly suggests what we already know: that “colleges and universities” is generic rather than existential in the resolution.

#### Violation: They spec genomic medicines

#### Standards:

#### [1] precision – the counter-interp justifies them arbitrarily doing away with random words in the resolution which decks negative ground and preparation because the aff is no longer bounded by the resolution. Independent voter for jurisdiction – the judge doesn’t have the jurisdiction to vote aff if there wasn’t a legitimate aff.

#### [2] Limits and ground – their model allows affs to defend anything from Covid vaccines to HIV drugs to Insulin— there's no universal DA since each has different functions and political implications — that explodes neg prep and leads to random medicine of the week affs which makes cutting stable neg links impossible — limits key to reciprocal engagement since they create a caselist for neg prep and it takes out ground like DAs to certain medicines which are some of the few neg generics when affs spec medicines.

#### [3] TVA solves – you could’ve read your plan as an advantage under a whole res advocacy.

## 2

#### Interpretation: affirmative debaters must delineate what intellectual property they reduce in the 1AC.

#### Four types of IP that are vastly different.

Ackerman 17 [Peter; Founder & CEO, Innovation Asset Group, Inc; “The 4 Main Types of Intellectual Property and Related Costs,” Decipher; 1/6/17; <https://www.innovation-asset.com/blog/the-4-main-types-of-intellectual-property-and-related-costs>] Justin

Intellectual property protection isn’t as simple as declaring ownership of a particular product or asset. In most countries, there are four primary types of intellectual property (IP) that can be legally protected: patents, trademarks, copyrights, and trade secrets. Each has their own attributes, requirements and costs.

Before narrowing your focus on which form of protection to use, know that these forms of protection are not mutually exclusive. Depending on what you’re doing, you might be able to use a “belt & suspenders” approach and apply multiple forms of protection, or one approach might be the most sensible. Read the descriptions below to get some of the basics.

Used to protect inventive ideas or processes – things that are new, useful and nonobvious - patents are what most often come to mind when thinking of IP protection. **Patents** are also used to protect newly engineered plant species or strains, as well.

Procedure For most companies, patents result from the following stages: Conceptualization Typically, innovation teams work to address a common problem facing their organization, industry, or the world at large when developing their idea. When they’ve arrived at a solution or concept, they’ll draw up plans and gather the resources necessary to make it a reality. Prototypes or drawings can be created to provide a more accurate description of the end product or process. Invention Disclosure An internal review process often occurs with every invention. The innovation team consists of internal counsel and an invention review panel of varying disciplines. The reviewers assess, rate, rank, score, and highlight potential flaws in the supporting documents and descriptions for the invention, which are then addressed by the inventor. These reviews can and often do take place multiple times for a single invention. Patent Application If the invention is deemed meritorious enough for the pursuit of patent protection, some organizations prepare their own provisional or nonprovisional patent applications. Others will farm this stage out. There may be more tweaks as an application is prepared, and then submission to the appropriate patent office and the prosecution stage begins (the back & forth with the government patent office). Typically it is outside counsel that manages this process and related docketing activities. Docketing is the overarching name for activities that include management of paperwork and meeting filing deadlines specified by the government patent office. Because the application process is often very complicated, patent offices highly recommend working with experienced patent attorneys to handle this process. Maintenance Once a patent is approved, it has a finite lifetime. Patent holders are responsible for maintaining and tracking the usage of their patents and paying the appropriate periodic government renewal fees. If a given technology or other patented asset is collecting dust, you might not want to renew it. Instead, you can try and sell, license or donate it. Conversely, if a patented asset is performing well through product sales or licensing activities and its life is getting shorter, you might think about innovating ahead and maintaining competitive momentum. Costs Costs will vary depending on the country or countries where you file an application, and can run into tens of thousands of dollars depending on the invention’s complexity, plus attorney fees. Maintenance fees over the lifetime of the patent can run into thousands more per patent, per country where patent rights have been granted. You have to keep your eyes on these costs.

Trademark

A trademark is unlike a patent in that it protects words, phrases, symbols, sounds, smells and color schemes. Trademarks are often considered assets that describe or otherwise identify the source of underlying products or services that a company provides, such as the MGM lion roar, the Home Depot orange color scheme, the Intel Inside logo, and so on.

Procedure Trademarks do not necessarily require government approval to be in effect; they can apply through abundant use in interstate commerce. Still, registration of a trademark affords far superior protection and is gained by filing an application with the proper government office. A trademark application requires the company or user to provide a clear description and representation of the mark and its uses in conjunction with associated products or services. As with patents, it’s a good idea to partner with outside counsel that specializes in trademark applications and/or search services so they can help ensure there is a clear path for your desired mark. Costs Trademarks are generally quite less expensive to obtain. According to the US Patent and Trademark Office, trademark registration currently costs between $225 and $325 for each class code you use per mark. Attorney and search fees are extra. There are also periodic (and relatively inexpensive) government maintenance fees for trademarks.

Copyrights do not protect ideas, but rather the manner in which ideas are expressed (“original works of authorship”) - written works, art, music, architectural drawings, or even programming code for software (most evident nowadays in video game entertainment). With certain exceptions, copyrights allow the owner of the protected materials to control reproduction, performance, new versioning or adaptations, public performance and distribution of the works. Procedure Copyrights in general attach when the original works become fixed in a tangible medium, but should be registered with the government copyright office for optimal protection in the form of damages, injunctions and confiscation. Copyright registration applications are much simpler than patents or trademarks, and typically can be obtained by the author alone. The US Copyright Office encourages use of their online application system, and requires a sample of the work to be protected and some background information about the author. Costs Depending on the type of work being protected, currently fees vary between $25-$100 in the US. The most frequent copyright registration sought is for one work by one author, and costs about $35.

Trade Secret

Trade secrets are proprietary procedures, systems, devices, formulas, strategies or other information that is confidential and exclusive to the company using them. They act as competitive advantages for the business. Procedure There actually isn’t a federally-regulated registration process for trade secrets. Instead, the onus is on the company in possession of the secret to take necessary precautions to maintain it as such. This is an ongoing, proactive process and can include clearly marking relevant documents as “Confidential,” implementing physical and data security measures, keeping logs of visitors and restricting access. The issuance of nondisclosure agreements or other documented assurances of secrecy can also be employed. One of the first defenses typically put up when you assert that someone misappropriated your trade secret is that you failed to adequately treat it as a trade secret. Costs Though there are no official registration costs, there are costs associated with taking appropriate precautions and security measures. You must weigh the competitive significance of your secrets against the cost of protecting them.

#### Violation:

#### Negate:

#### 1] Shiftiness- they can redefine what intellectual properties the 1ac defends in the 1ar which decks strategy and allows them to wriggle out of negative positions which strips the neg of specific IP DAs, IP PICs, and case answers. They will always win on specificity weighing.

#### CX can’t resolve this and is bad because A] Not flowed B] Skews 6 min of prep C] They can lie and no way to check D] Debaters can be shady.

#### 2] Real World- policy makers will always specify what the object of change is. That outweighs since debate has no value without portable application. It also means zero solvency since the WTO, absent spec, can circumvent aff’s policy since they can say they didn’t know what was affected.

#### This spec shell isn’t regressive- it literally determines what the affirmative implements and who it affects

#### Fairness – debate is a competitive activity that requires fairness for objective evaluation. Outweighs because it’s the only intrinsic part of debate – all other rules can be debated over but rely on some conception of fairness to be justified.

#### Drop the debater – a] deter future abuse and b] set better norms for debate.

#### Competing interps – [a] reasonability is arbitrary and encourages judge intervention since there’s no clear norm, [b] it creates a race to the top where we create the best possible norms for debate.

#### No RVIs – a] illogical, you don’t win for proving that you meet the burden of being fair, logic outweighs since it’s a prerequisite for evaluating any other argument, b] RVIs incentivize baiting theory and prepping it out which leads to maximally abusive practices

## 3

#### The US is leading the biopharmaceuticals race – but China is close. Catching up would be a death sentence for US lead.

Gupta 21 [Gaurav; Physician, founder of the biotechnology investment firm Ascendant BioCapital; “As Washington Ties Pharma’s Hands, China Is Leaping Ahead,” Barrons; 6/11/21; <https://www.barrons.com/articles/as-washington-ties-pharmas-hands-china-is-leaping-ahead-51623438808>] Justin

There should be no doubt that we are living at the dawn of a golden age of biomedical innovation. The American scientific engine that produced Covid-19 vaccines in record time was fueled by a convergence of advances in genomics, biomarkers, data science, and manufacturing years in the making. The first Food and Drug Administration approvals of a host of new product formats—oligonucleotide, bispecific, oncolytic virus, CAR-T, and lentivirus/AAV—all took place within the last decade. These represent an unprecedented expansion of the armamentarium that physicians have at their disposal to treat and cure disease. In the last few years, 47% of all new medicines were invented by U.S. biopharma companies, with homegrown startups driving the majority of innovation. The bulk of the remainder were developed by foreign companies specifically for the U.S. market.

An indirect benefit of these trends is that most novel therapeutics undergo clinical development and early commercial launch here in the U.S. The rest of the world understands that the American patient has earlier and broader access to groundbreaking therapies via these mechanisms. Indeed, the past decade is filled with examples of medical “firsts” for American patients: the first cure for Hepatitis C, the first gene therapy for blindness, the first immunotherapy for cancer. Future rewards will be greater still if we preserve our current system of incentivizing and protecting innovation.

The remarkable innovation capacity of our biopharmaceutical industry ought to be a source of national pride. Yet while “Made in America” is the global standard for medicines in development today, misguided policy risks ceding our scientific prowess to other countries in the future. This is particularly true in the case of China, where biotechnology has become a strategic pillar for the health of its people and economy.

From 2016 to 2020, the market capitalization of all Chinese biopharma companies increased exponentially from $1 billion to over $200 billion. China saw over $28 billion invested in its life sciences sector in 2020, double the previous year’s amount. Returns on China’s investment are already arriving. The FDA approved a drug developed in China for the first time ever in 2019. While China’s innovation capacity currently remains behind America’s, my experiences as a biopharma professional make it clear they are doing everything they can to catch up and catch up fast.

In fact, when I speak to Chinese biotechnology executives, they boast that they can run clinical trials faster than their U.S. counterparts. The danger of misguided policies that disincentivize pharmaceutical innovation in the U.S. is effectively driving that same innovation to China. If we close off the market in the U.S. at the same time that China is opening its market to innovative new products, then we will see companies choose to first launch impactful novel medicines in China, based on clinical trials conducted in China. Because the FDA rarely accepts data generated entirely outside the U.S., this relocation of research capacity will negatively affect Americans’ access to cutting-edge therapies.

#### The plan gives away sensitive biotechnology information that facilitates a China lead.

Rogin 21 [Josh; Columnist for the Global Opinions section of the Washington Post and a political analyst with CNN. Previously, he has covered foreign policy and national security for Bloomberg View, Newsweek, the Daily Beast, Foreign Policy magazine, Congressional Quarterly, Federal Computer Week magazine and Japan’s Asahi Shimbun newspaper. He was a 2011 finalist for the Livingston Award for Young Journalists and the 2011 recipient of the Interaction Award for Excellence in International Reporting. Rogin holds a BA in international affairs from George Washington University and studied at Sophia University in Tokyo. He lives in Washington, DC; “Opinion: The wrong way to fight vaccine nationalism,” The Washington Post; 4/8/21; <https://www.washingtonpost.com/opinions/global-opinions/the-wrong-way-to-fight-vaccine-nationalism/2021/04/08/9a65e15e-98a8-11eb-962b-78c1d8228819_story.html>] Justin

Americans will not be safe from covid-19 until the entire world is safe. That basic truth shows why vaccine nationalism is not only immoral but also counterproductive. But the simplest solutions are rarely the correct ones, and some countries are using the issue to advance their own strategic interests. The Biden administration must reject the effort by some nations to turn our shared crisis into their opportunity.

As the inequities of vaccine distribution worldwide grow, a group of more than 50 developing countries led by India and South Africa is pushing the World Trade Organization to dissolve all international intellectual property protections for pandemic-related products, which would include vaccine research patents, manufacturing designs and technological know-how. The Trump administration rejected the proposal to waive the agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) for the pandemic when it was introduced in October.

Now, hundreds of nongovernmental organizations and dozens of Democratic lawmakers are pushing the Biden administration to support the proposal. But many warn the move would result in the United States handing over a generation of advanced research — much of it funded by the U.S. taxpayer — to our country’s greatest competitors, above all China.

In Congress, there’s justified frustration with the United States’ failure to respond to China’s robust vaccine diplomacy, in which Beijing has conditioned vaccine offers to pandemic-stricken countries on their ignoring security concerns over Chinese telecom companies or abandoning diplomatic recognition of Taiwan. There’s also a lot of anger at Big Pharma among progressives for profiting from the pandemic.

“We are in a race against time, and unfortunately Big Pharma is standing in the way of speedily addressing this problem,” Rep. Jan Schakowsky (D-Ill.), who supports the effort to waive intellectual property protections, told me in an interview. “I think the real security issue is that while the United States balks in making sure that we help ourselves, that these adversaries will just jump right in.”

Schakowsky argued that alternative measures for helping poor countries manufacture vaccines are simply not moving fast enough to save lives and that the United States has a duty to respond. House Speaker Nancy Pelosi (D-Calif.) personally conveyed her support for the waiver to President Biden, Schakowsky said.

But Big Pharma is just one piece of the puzzle. Countries such as India and South Africa have been trying to weaken WTO intellectual property protections for decades. The mRNA technology that underpins the Pfizer and Moderna vaccines was funded initially by the Defense Advanced Research Projects Agency and has national security implications.

Inside the Biden administration, the National Security Council has already convened several meetings on the issue. The waiver is supported by many global health officials in the White House and at the U.S. Agency for International Development, who believe the United States’ international reputation is suffering from its perceived “America First” vaccine strategy.

On Wednesday, U.S. Trade Representative Katherine Tai spoke with WTO Director General Ngozi Okonjo-Iweala about the waiver issue. USTR is convening its own interagency meetings on the issue, which many see as a move to reassert its jurisdiction over WTO matters.

If and when this does get to Biden’s desk, he will also hear from national security officials who believe that waiving TRIPS would result in the forced transfer of national security-sensitive technology to China, a country that strives to dominate the biotechnology field as part of its Made in China 2025 strategy. Once countries such as China have this technology, they will apply their mercantilist industrial models to ensure their companies dominate these strategically important industries, potentially erasing thousands of U.S. jobs.

“We would be delivering a competitive advantage to countries that are increasingly viewed as our adversaries, at taxpayer expense, when there are other ways of doing this,” said Mark Cohen, senior fellow at the University of California at Berkeley Law School.

#### China is actively seeking out CRISPR tech to facilitate battlefield enhancements- the aff gives it away

Kania and VornDick 19 Elsa Kania and Wilson VornDick (Elsa Kania is an Adjunct Senior Fellow with the Technology and National Security Program at the Center for a New American Security. Wilson VornDick consults on national security, emerging technologies, and China for Duco and Rane. )10-8-2019, "China’s Military Biotech Frontier: CRISPR, Military-Civil Fusion, and the New Revolution in Military Affairs," Jamestown, https://jamestown.org/program/chinas-military-biotech-frontier-crispr-military-civil-fusion-and-the-new-revolution-in-military-affairs/SJKS

While the potential leveraging of CRISPR to increase human capabilities on the future battlefield remains only a hypothetical possibility at the present, there are indications that Chinese military researchers are starting to explore its potential. Of course, genetic engineering has numerous military applications in materials science, such as those that can involve maritime and aerospace applications. However, at a time when the Central Military Commission (CMC) Science and Technology Commission is also supporting research in human performance enhancement and “new concept” biotechnology, the potential intersections of these interests merit concern and consideration. For instance, a doctoral dissertation titled “Evaluation and Research on Human Performance Enhancement Technology,” published in 2016, envisions CRISPR as one of three primary “human performance enhancement technologies” (人效能增强技术, ren xiaoneng zengqiang jishu) that can be utilized to boost personnel combat effectiveness. The researcher argues that because CRISPR holds such “great potential” as a “disruptive” technology, China must “seize the initiative.” Conclusion and Implications Ultimately, today’s advances in biotechnology may prove revolutionary, and the strategic implications, whether for medicine or the military or aggregate national competitiveness, are only just starting to be appreciated. [22] Today, the PRC is actively exploring new frontiers of such biological cross-disciplinary technologies: from these prominent developments in CRISPR to bionic robotics, intelligentized exoskeletons, and techniques for human-machine collaboration. So too, at a time when Chinese universities and enterprises are pursuing investment and expanding global research collaborations in such fields, it is important that their foreign partners remain cognizant of the interests and involvements of their counterparts. For instance, although biomedical research involves numerous promising applications in medicine and therapeutics, there are also reasons for concern about some of the ethical and security externalities of these research engagements. [23] Going forward, these trends will merit continued analytic attention.

#### Gains are directly converted to military prowess – unravels the liberal order

Kuo 17 [Mercy A; Executive Vice President at Pamir Consulting; “The Great US-China Biotechnology and Artificial Intelligence Race,” The Diplomat; 8/23/17; <https://thediplomat.com/2017/08/the-great-us-china-biotechnology-and-artificial-intelligence-race/>] TDI // Re-Cut Justin

Trans-Pacific View author Mercy Kuo regularly engages subject-matter experts, policy practitioners, and strategic thinkers across the globe for their diverse insights into the U.S. Asia policy. This conversation with Eleonore Pauwels – Director of Biology Collectives and Senior Program Associate, Science and Technology Innovation Program at the Wilson Center in Washington D.C. – is the 104th in “The Trans-Pacific View Insight Series.”

Explain the motivation behind Chinese investment in U.S. genomics and artificial intelligence (AI).

With large public and private investments inland and in the U.S., China plans to become the next AI-Genomics powerhouse, which indicates that these technologies will soon converge in China.

China’s ambition is to lead the global market for precision medicine, **which necessitates acquiring strategic tech**nological and human capital in both genomics and AI. And the country excels at this game. A sharp blow in this U.S.-China competition happened in 2013 when BGI purchased Complete Genomics, in California, with the intent to build its own advanced genomic sequencing machines, therefore securing a technological knowhow mainly mastered by U.S. producers.

There are significant economic incentives behind China’s heavy investment in the increasing convergence of AI and genomics. This golden combination will drive precision medicine to new heights by developing a more sophisticated understanding of how our genomes function, leading to precise, even personalized, cancer therapeutics and preventive diagnostics, such as liquid biopsies. By one estimate, the liquid biopsy market is expected to be worth $40 billion in 2017.

Assess the implications of iCarbonX of Shenzhen’s decision to invest US$100 million in U.S.-company PatientsLikeMe relative to AI and genomic data collection.

iCarbonX is a pioneer in AI software that learns to recognize useful relationships between large amounts of individuals’ biological, medical, behavioral and psychological data. Such a data-ecosystem will deliver insights into how an individual’s genome is mutating over time, and therefore critical information about this individual’s susceptibilities to rare, chronic and mental illnesses. In 2017, iCarbonX invested $100 million in PatientsLikeMe, getting a hold over data from the biggest online network of patients with rare and chronic diseases. If successful, this effort could turn into genetic gold, making iCarbonX one of the wealthiest healthcare companies in China and beyond.

The risk factor is that iCarbonX is handling more than personal data, but potentially vulnerable data as the company uses a smartphone application, Meum, for customers to consult for health advice. Remember that the Chinese nascent genomics and AI industry relies on cloud computing for genomics data-storage and exchange, creating, in its wake, new vulnerabilities associated with any internet-based technology. This phenomenon has severe implications. How much consideration has been given to privacy and the evolving notion of personal data in this AI-powered health economy? And is our cyberinfrastructure ready to protect such trove of personal health data from hackers and industrial espionage? In this new race, will China and the U.S. have to constantly accelerate their rate of cyber and bio-innovation to be more resilient? Refining our models of genomics data protection will become a critical biosecurity issue.

Why is Chinese access to U.S. genomic data a national security concern?

**Genomics** and computing research **is inherently dual-use, therefore a strategic advantage in a nation’s security arsenal.**

Using AI systems to understand how the functioning of our genomes impacts our health **is of strategic importance for biodefense.** This knowledge will lead to increasing developments at the forefront of medical countermeasures, **including vaccines**, antibiotics, and targeted treatments relying on virus-engineering and microbiome research. Applying deep learning to genomics data-sets could help geneticists learn how to use genome-editing (CRISPR) to efficiently engineer living systems, but also to treat and, even “optimize,” human health, **with potential applications in military enhancements**. A $15 million partnership between a U.S. company, Gingko Bioworks, and DARPA aims to genetically design new probiotics as a protection for soldiers against a variety of stomach bugs and illnesses.

China could be using the same deep learning techniques on U.S. genomics data to better comprehend how to develop, patent and manufacture tailored cancer immunotherapies in high demand in the United States. Yet, what if Chinese efforts venture into understanding how to impact key genomics health determinants relevant to the U.S. population? **Gaining access to increasingly large U.S. genomic data-sets gives China a knowledge advantage into leading the next steps in bio-military research.**

Could biomedical data be used to develop bioweapons? Explain.

Personalized medicine advances mean that personalized bio-attacks are increasingly possible. The combination of AI with biomedical data and genome-editing technologies will help us predict genes most important to particular functions. Such insights will contribute to knowing how a particular disease occurs, how a newly-discovered virus has high transmissibility, but also why certain populations and individuals are more susceptible to it. Combining host susceptibility information with pathogenic targeted design, **malicious actors could engineer pathogens that are tailored to overcome the immune system or the microbiome of specific populations.**

#### That causes extinction through GPW

Yulis 17 [Max; Major in PoliSci, Penn Political Review; “In Defense of Liberal Internationalism,” Penn Political Review; 4/8/17; <http://pennpoliticalreview.org/2017/04/in-defense-of-liberal-internationalism/>] // Re-Cut Justin

Over the past decade, international headlines have been bombarded with stories about the unraveling of the post-Cold War world order, the creation of revolutionary smart devices and military technologies, the rise of militant jihadist organizations, and nuclear proliferation. Indeed, times are paradoxically promising and alarming. In relation to treating the world’s ills, fortunately, there is a capable hegemon– one that has the ability to revive the world order and traditionally hallmarked human rights, peace, and democracy. The United States, with all of its shortcomings, had crafted an international agenda that significantly impacted the post-WWII landscape. Countries invested their ambitions into security communities, international institutions, and international law in an effort to mitigate the chances of a nuclear catastrophe or another World War. The horrors and atrocities of the two Great Wars had traumatized the global community, which spurred calls for peace and the creation of a universalist agenda. Today, the world’s fickle and declining hegemon still has the ability, but not the will, to uphold the world order that it had so carefully and eagerly helped construct. Now, the stakes are too high, and there must be a mighty and willing global leader to lead the effort of diffusing democratic ideals and reinforcing stability through both military and diplomatic means. To do this, the United States must abandon its insurgent wave of isolationism and protectionism, and come to grips with the newly transnational nature of problems ranging from climate change to international terrorism.

First, the increase in intra-state conflict should warrant concern as many countries, namely in Africa and the Middle East, are seeing the total collapse of civil society and government. These power vacuums are being filled with increasingly ideological and dangerous tribal and non-state actors, such as Boko Haram, ISIS, and Al-Shabaab. Other bloody civil wars in Rwanda, Sudan, and the Congo have contributed to the deaths of millions in the past two decades. As the West has seen, however, military intervention has not been all that successful in building and empowering democratic institutions in the Far East. A civil crusade, along with the strengthening of international institutions, may in fact be the answer to undoing tribal, religious, and sectarian divisions, thereby mitigating the prospects of civil conflict. During the Wilsonian era, missionaries did their part to internationalize the concept of higher education, which has contributed to the growth of universities in formerly underdeveloped countries such as China and South Korea.[1] In addition, the teachings of missionaries emphasized the universality of humanity and the oneness of man, which was antithetical to the justifications for imperialism and the rampant sectarianism that plagued much of the Middle East and Africa.[2] Seeing that an increase in the magnitude of human casualty is becoming more of a reality due to advancements in military technology and the increasing outbreaks of civil war, international cooperation and the diffusion of norms that highlight the importance of stable governance, democracy, and human rights is the only recourse to address the rise in sectarian divides and civil conflicts. So long as the trend of the West’s desire to look inward continues, it is likely that nation states mired in conflict will devolve into ethnic or tribal enclaves bent on relying on war to maintain their legitimacy and power. Aside from growing sectarianism and the increasing prevalence of failed states, an even more daunting threat come from weapons that transcend the costs of conventional warfare.

The problem of nuclear proliferation has been around for decades, and on the eve of President Trump’s inauguration, it appeared that Obama’s lofty goal of advocating for nonproliferation would no longer be a priority of American foreign policy.[3] In addition, now that the American president is threatening to undo much of the United States’ extensive network of alliances, formerly non-nuclear states may be forced to rearm themselves. Disarmament is central to liberal internationalism, as was apparent by the Washington Naval Treaty advocated by Wilson, and by the modern CTBT treaty. The reverse is, however, being seen in the modern era, with cries coming from Japan and South Korea to remobilize and begin their own nuclear weapon programs.[4] A world with more nuclear actors is a formula for chaos, especially if nuclear weapons become mass-produced. Non-state actors will increasingly eye these nuclear sites as was the case near a Belgian nuclear power plant just over a year ago.[5] If any government commits a serious misstep, access to nuclear weapons on the behalf of terrorist and insurgent groups will become a reality, especially if a civil war occurs. States with nuclear weapons require domestic stability and strong security, which is why states such as Israel, North Korea, and Pakistan could be in serious trouble in the event of a domestic uprising or military coup. The disarmament of all states is essential for human survival, and if it is not achieved, then a world full of nuclear weapons and an international system guided by realpolitik could give rise to nuclear warfare. In today’s world, nuclear weapons leave all states virtually defenseless. But, for nuclear deproliferation to become a cornerstone of the global agenda, a pacifying and democratic power must rise to the limelight to advocate the virtues of peace, stability, and human rights.

## Case

### 1NC- DeDev

#### No war - Cheap talk solves.

Carter 18 Erin Baggott Carter, International Relations Professor at the University of Southern California. [Diversionary Cheap Talk: Unemployment and US Foreign Policy Rhetoric, 1945-2010, http://www.erinbcarter.org/documents/diversionUS.pdf]//BPS

5 Conclusion This study shows that when economic conditions deteriorate, American presidents consolidate domestic support by criticizing other countries. By cueing national identity and highlighting differences between nations, they elicit an ingroup rally that boosts their popularity. Poll data show that citizens evaluate leaders more highly after they engage in hostile for¬eign policy rhetoric and economic data show that leaders are more likely to engage in that rhetoric when unemployment (or the misery index) is higher. Further strengthening the no¬tion that this behavior is strategic, leaders target traditional adversaries for hostile foreign policy rhetoric, since threatening outgroups render intergroup distinctions most stark. I find no evidence for diversion in the form of material dispute initiation. For leaders choosing between hostile rhetoric, economic reform, and international conflict to increase domestic popularity, hostile rhetoric is the least costly and risky option, even though it is a short term solution because sustained bluster invites the criticism of party elites. For American presidents, cheap talk pays. Future research should focus on three areas. First, citizens have multiple political al¬legiances. The political communication literature suggests that the media is an important intermediary between elites and citizens. For example, rallies are smaller when there is elite debate surrounding a presidential action. While this study finds that presidents are able to generate rallies with rhetoric and that rallies are mediated by citizen partisanship, further research might focus on how sub- and superordinate group membership affects the accep¬tance of political cues from leaders in a more complex—perhaps experimental—framework. Second, there is little research on political rhetoric in less representative countries. Diversionary cheap talk is not particular to America: Mahmoud Ahmadinejad and Hugo Chavez 10 won massive popularity through their anti-Americanism, for instance. Chinese policymak¬ers bluster about the South China Sea to increase their domestic legitimacy. Scholars have devoted relatively little attention to rhetoric in international politics due, in part, to scarce data. The American Diplomacy Dataset helps address that paucity. While verbal and material behavior are theoretically and empirically distinct, they are sometimes substitutes, and the rhetorical aspects of international politics remain under-theorized and under-explored.

#### Downturn won’t cause war – prefer post-COVID evidence

Walt 5/13 (Stephen M. Walt is the Robert and Renée Belfer professor of international relations at Harvard University; 5/13/20; "Will a Global Depression Trigger Another World War?"; *Foreign Policy*; https://foreignpolicy.com/2020/05/13/coronavirus-pandemic-depression-economy-world-war/)

One familiar argument is the so-called diversionary (or “scapegoat”) theory of war. It suggests that leaders who are worried about their popularity at home will try to divert attention from their failures by provoking a crisis with a foreign power and maybe even using force against it. Drawing on this logic, some Americans now worry that President Donald Trump will decide to attack a country like Iran or Venezuela in the run-up to the presidential election and especially if he thinks he’s likely to lose. This outcome strikes me as unlikely, even if one ignores the logical and empirical flaws in the theory itself. War is always a gamble, and should things go badly—even a little bit—it would hammer the last nail in the coffin of Trump’s declining fortunes. Moreover, none of the countries Trump might consider going after pose an imminent threat to U.S. security, and even his staunchest supporters may wonder why he is wasting time and money going after Iran or Venezuela at a moment when thousands of Americans are dying preventable deaths at home. Even a successful military action won’t put Americans back to work, create the sort of testing-and-tracing regime that competent governments around the world have been able to implement already, or hasten the development of a vaccine. The same logic is likely to guide the decisions of other world leaders too. Another familiar folk theory is “military Keynesianism.” War generates a lot of economic demand, and it can sometimes lift depressed economies out of the doldrums and back toward prosperity and full employment. The obvious case in point here is World War II, which did help the U.S economy finally escape the quicksand of the Great Depression. Those who are convinced that great powers go to war primarily to keep Big Business (or the arms industry) happy are naturally drawn to this sort of argument, and they might worry that governments looking at bleak economic forecasts will try to restart their economies through some sort of military adventure. I doubt it. It takes a really big war to generate a significant stimulus, and it is hard to imagine any country launching a large-scale war—with all its attendant risks—at a moment when debt levels are already soaring. More importantly, there are lots of easier and more direct ways to stimulate the economy—infrastructure spending, unemployment insurance, even “helicopter payments”—and launching a war has to be one of the least efficient methods available. The threat of war usually spooks investors too, which any politician with their eye on the stock market would be loath to do. Economic downturns can encourage war in some special circumstances, especially when a war would enable a country facing severe hardships to capture something of immediate and significant value. Saddam Hussein’s decision to seize Kuwait in 1990 fits this model perfectly: The Iraqi economy was in terrible shape after its long war with Iran; unemployment was threatening Saddam’s domestic position; Kuwait’s vast oil riches were a considerable prize; and seizing the lightly armed emirate was exceedingly easy to do. Iraq also owed Kuwait a lot of money, and a hostile takeover by Baghdad would wipe those debts off the books overnight. In this case, Iraq’s parlous economic condition clearly made war more likely. Yet I cannot think of any country in similar circumstances today. Now is hardly the time for Russia to try to grab more of Ukraine—if it even wanted to—or for China to make a play for Taiwan, because the costs of doing so would clearly outweigh the economic benefits. Even conquering an oil-rich country—the sort of greedy acquisitiveness that Trump occasionally hints at—doesn’t look attractive when there’s a vast glut on the market. I might be worried if some weak and defenseless country somehow came to possess the entire global stock of a successful coronavirus vaccine, but that scenario is not even remotely possible. If one takes a longer-term perspective, however, a sustained economic depression could make war more likely by strengthening fascist or xenophobic political movements, fueling protectionism and hypernationalism, and making it more difficult for countries to reach mutually acceptable bargains with each other. The history of the 1930s shows where such trends can lead, although the economic effects of the Depression are hardly the only reason world politics took such a deadly turn in the 1930s. Nationalism, xenophobia, and authoritarian rule were making a comeback well before COVID-19 struck, but the economic misery now occurring in every corner of the world could intensify these trends and leave us in a more war-prone condition when fear of the virus has diminished. On balance, however, I do not think that even the extraordinary economic conditions we are witnessing today are going to have much impact on the likelihood of war. Why? First of all, if depressions were a powerful cause of war, there would be a lot more of the latter. To take one example, the United States has suffered 40 or more recessions since the country was founded, yet it has fought perhaps 20 interstate wars, most of them unrelated to the state of the economy . To paraphrase the economist Paul Samuelson’s famous quip about the stock market, if recessions were a powerful cause of war, they would have predicted “nine out of the last five (or fewer).” Second, states do not start wars unless they believe they will win a quick and relatively cheap victory. As John Mearsheimer showed in his classic book Conventional Deterrence, national leaders avoid war when they are convinced it will be long, bloody, costly, and uncertain. To choose war, political leaders have to convince themselves they can either win a quick, cheap, and decisive victory or achieve some limited objective at low cost. Europe went to war in 1914 with each side believing it would win a rapid and easy victory, and Nazi Germany developed the strategy of blitzkrieg in order to subdue its foes as quickly and cheaply as possible. Iraq attacked Iran in 1980 because Saddam believed the Islamic Republic was in disarray and would be easy to defeat, and George W. Bush invaded Iraq in 2003 convinced the war would be short, successful, and pay for itself.The fact that each of these leaders miscalculated badly does not alter the main point: No matter what a country’s economic condition might be, its leaders will not go to war unless they think they can do so quickly, cheaply, and with a reasonable probability of success. Third, and most important, the primary motivation for most wars is the desire for security, not economic gain. For this reason, the odds of war increase when states believe the long-term balance of power may be shifting against them, when they are convinced that adversaries are unalterably hostile and cannot be accommodated, and when they are confident they can reverse the unfavorable trends and establish a secure position if they act now. The historian A.J.P. Taylor once observed that “every war between Great Powers [between 1848 and 1918] … started as a preventive war, not as a war of conquest,” and that remains true of most wars fought since then. The bottom line: Economic conditions (i.e., a depression) may affect the broader political environment in which decisions for war or peace are made, but they are only one factor among many and rarely the most significant. Even if the COVID-19 pandemic has large, lasting, and negative effects on the world economy—as seems quite likely—it is not likely to affect the probability of war very much, especially in the short term. To be sure, I can’t rule out another powerful cause of war—stupidity—especially when it is so much in evidence in some quarters these days. So there is no guarantee that we won’t see misguided leaders stumbling into another foolish bloodletting. But given that it’s hard to find any rays of sunshine at this particular moment in history, I’m going to hope I’m right about this one.

#### Growth means extinction:

#### Warming – Growth causes converging ecological crises that culminate in extinction

Williams ‘19 (Casey Williams; freelance writer covering climate, environment, and labor politics, citing Ingrid Visseren-Hamakers, associate professor of environmental science and policy at George Mason University and a coordinating lead author of the IPBES report; 5/16/19; "The “Great Dying” Has Begun. Only Transforming the Economy Can Stop It."; *Medium*; https://onezero.medium.com/the-great-dying-has-begun-only-transforming-the-economy-can-stop-it-4eadd8f7ccf8)

Extinction has threatened Earth’s plant and animal life several times over the planet’s multibillion-year history. During the mass extinction event called the “Great Dying,” around 250 million years ago, 96% of all marine species died out – gone forever. Life is once again headed for total collapse. While coverage of last week’s major Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) report on biodiversity loss rightly played up the dire numbers – an estimated 1 million species gone by 2050 – what’s truly remarkable are the solutions the authors offer in response. Ditching the timid pragmatism of technocrats, these scientists are calling for nothing less than the total transformation of the global economy. Producing for profit has failed us, they say, and failed the planet. We need a new system. Only “transformative change” can stop massive species loss, according to the report’s conclusion. That means overhauling the global economy to prioritize human well-being and environmental sustainability rather than the pursuit of profit. “We’re not addressing the underlying causes of biodiversity loss, which is the way we organize economies, production and consumption patterns, our institutions, and our rules,” says Ingrid Visseren-Hamakers, associate professor of environmental science and policy at George Mason University and a coordinating lead author of the IPBES report. “We need to transform the sheer fabric of our society to become more sustainable.” Today’s great dying is happening faster than ever before, and its causes are clear: breakneck development, fossil-fueled global warming, industrial pollution, single-crop agriculture. Complex as these processes are, they point to a common culprit: A growth-based economic system bent on wringing cash from nature has exploited the planet’s ecosystems beyond what they can bear. Now, Earth’s fragile life-support system is entering a death spiral that threatens human existence and which no one is prepared to stop. Evidence of an impending mass extinction has been accumulating for years, but this report paints an especially dire picture of the pace and scale of the crisis. Plant and animal species are vanishing at an unprecedented rate: 1 million of Earth’s 8 million known species could go extinct within 30 years. Biodiversity “is declining faster than at any time in human history,” the report’s authors conclude. And with it, the ecological prerequisites for human life are dwindling: clean air and water, healthy food, stable climates, medicines, and much more. Efforts to slow the dying have proven woefully inadequate. Governments will miss key conservation targets in the coming years, signing death warrants for countless corals and amphibians and exposing up to 300 million additional people to dangerous flooding as coastal habitats vanish. That’s because governments, businesses, and others have failed to tackle root causes of ecosystem collapse. “It’s inevitable that you come to conclusions like this, because that’s what the science says.” IPBES is careful to remain nonpartisan and lays out options, not prescriptions, for policymakers. But the report’s conclusions are “in essence political,” Visseren-Hamakers says. “We’re changing the goals of our society. We want to switch the goal from making profit to living sustainably.” The authors of the report propose “steering away from the current limited paradigm of economic growth,” though they “expect opposition from those with interests vested in the status quo.” Given that growth is the market economy’s animating principle, this is essentially code for overhauling global capitalism and angering some large corporations in the process. Like the Intergovernmental Panel on Climate Change’s 2018 Special Report on Global Warming, the new study’s frankness is history-making. After years of highlighting piecemeal reforms, the scientific community is now asking us to completely rethink modern society. Not because they’re ideological, but because they’re scientists. They go where the evidence leads. “It’s inevitable that you come to conclusions like this, because that’s what the science says,” Visseren-Hamakers says. Of course, the authors also offer less drastic solutions. Deep in the report, they suggest that putting a price tag on “ecosystem services” can help account for and redress the costs of treating nature like a waste dump. It’s an old idea. Factoring nature’s value into economic calculations would eliminate “perverse incentives” to pollute and give companies and governments greater incentive to conserve biodiversity. For example, carbon pricing is designed to account for the value of a stable climate. Factoring environmental costs of carbon pollution into production decisions should discourage, in theory, the use of fossil fuels that, directly and indirectly, degrade ecosystems. Though not particularly ambitious, pricing nature was once widely believed to be a pragmatic response to species loss. “Fifteen years ago, financialization of nature schemes would have been front and center of a report like this,” says Jesse Goldstein, assistant professor of sociology at Virginia Commonwealth University. The fact that such policies are not front and center marks a historic shift in tone. Pragmatic scientists and policymakers want fast, achievable solutions to urgent problems. And so, for decades, they’ve resisted calling for fundamental changes to the economic system. Even when it’s been clear that economic growth accelerates biodiversity loss, reigning in global capitalism has seemed too drastic, cumbersome, and infeasible to count as a realistic solution to the crisis. “The overarching language [of the report] says everything’s got to change,” Goldstein says. “But the assumption is that massive, transformative political and economic change takes too much time and that technocratic and technological policy-based solutions are quicker.” But now it’s the pragmatic solutions that seem out of step with the reality of the extinction crisis. Given the deadly seriousness of species extinction, the most ambitious solutions have become the most necessary. It would be reductive to attribute biodiversity loss solely to modern capitalism. After all, humans have destroyed environments since they learned to whittle sticks into spears and clear forests to make farms. Indigenous peoples in North America wiped out the mastodon long before they could hope to cash in on its hide. But capitalism introduces a totally different set of incentives: Once plant and animal life is viewed as a production input, a cash engine, or an acceptable casualty of profit accumulation, it makes sense to wring revenue from life until it’s gone, especially when competitive pressures reward making a quick buck. The IPBES report makes clear that today’s great dying differs in kind, not degree, from earlier waves of biodiversity loss. Since 1900, the abundance of major species has declined by 20% globally. And since 1970, as industrial production has exploded, nature’s productivity has plummeted across the board. Species extinction is now “tens to hundreds of times higher than it has averaged over the past 10 million years,” the authors write. In The Sixth Extinction, journalist Elizabeth Kolbert documents the dizzying pace of modern ecological destruction. “Just in the past century, CO2 levels in the atmosphere have changed by as much – a hundred parts per million – as they normally do in a hundred-thousand-year glacial cycle,” she writes. “Meanwhile, the drop in ocean pH levels that has occurred over the past fifty years may well exceed anything that happened in the seas during the previous fifty million.” This past weekend, air temperatures around parts of the Arctic Ocean reached 84 degrees Fahrenheit, while the concentration of CO2 eclipsed 415 parts per million for the first time in human history. No matter how unsustainable our ancestors’ societies were, ours is infinitely worse. Amid the dying, however, the economy booms. Crop yields have increased 300% since the 1970s, per the IPBES report, and businesses are now extracting 60 billion tons of resources from the earth each year. Those resources run the gamut: oil for cars, timber for buildings, precious metals for our precious iPhones. It might be one thing if biodiversity loss were paying for better lives for everyone – an unfortunate cost of making sure everyone has a safe home, healthy food, and reliable transportation – but trends in wealth inequality tell a different story. America’s richest people have doubled their incomes since the 1970s, while working people have experienced wage stagnation and disproportionately suffered the effects of habitat loss, extreme weather, and food shortages. Given these trends, “it’s hard to make with a straight face the argument that green capitalism is going to save the planet,” Goldstein added. What seems needed is something far more radical. The world’s best scientists seem to agree. “The discourse on sustainability is changing,” Visseren-Hamakers says. “It’s now normal to talk about transformation, which is nothing less than a revolution.”

#### Society is unsustainably complex – that ensures a global cognitive collapse – extinction.

Annunziata and McManus **’**1-11—former Chief Economist and Head of Business Innovation Strategy at General Electric AND Visiting Research Fellow at Autodesk, Senior Advisor at BCG (Marco and Mickey, “The Great Cognitive Depression,” <https://www.forbes.com/sites/marcoannunziata/2019/01/11/the-great-cognitive-depression/#49ed9dc174c1>, dml)

We have seen a dramatic increase in the amount of complexity that exists in the world. Mickey McManus’s book Trillions noted that as early as 2010, the semiconductor industry had reached the point where they were making more transistors than grains of rice, cheaper. Connectivity has amplified the global amount of aggregate complexity by enabling it to break out of any given domain and spread across the world. The rise of the so called “Internet of Things”—starting with mobile devices and now connected products and vehicles and platforms—is flooding every corner of our homes, factories, and communities. Everything becomes connected—to everything else and to us. The global economy has also become inextricably interconnected; our society is more and more interdependent. Across multiple fields, our knowledge gets deeper and more detailed; we solve old problems and create new ones at accelerating speed. No matter our walk of life, today we are asked to grasp a widening range of increasingly complex issues: climate change, energy policy, advances in health care, the likely impact of robotics and Artificial Intelligence. All these new sources of complexity are increasing the frequency and amplitude of positive and negative feedback loops into crashing waves and a torrential flood. There are no signs of this complexity leveling out, quite the opposite—the waves are getting more erratic and larger and larger. We are standing on the shores of a trillion-node-network tsunami-like event that has never been seen before. Worse this isn’t just a rise of passive information, but also a deluge of active machine agents. When trillions of things not only collect billions of bits of information but also demand our attention and change our environments dynamically on the fly, our ability to think, make decisions and take actions may be on the verge of collapse. The coming together of digital and physical technologies has turned business models upside down and made it even harder for economic analysis to keep up. The “prosumer” concept of the 1980s is back with a vengeance as new technologies allow households to produce electricity and sell it back into the grid, and give them access to manufacturing power with affordable 3D printers. Economists struggle to explain the collapse in productivity that accompanied the latest surge in innovations—and that shows compelling inverse correlation to the rise of connected (and cognitive) devices like mobile phones; their cacophony of explanations ranges from the charge that new digital innovations have no economic value to the claim that they create massive value delivered for free, and hence not recorded in the official statistics. Our ability to think and make smart decisions is eroding just as our environment gets more complex and harder to grasp with our traditional tools. Stone age tools for cognitive age challenges? But wait, this is not the first time we face a rise in complexity and have to contend with multiple disruptions. We’ve faced tough challenges before and built structures to allow us to manage and make decisions at vast scales. Corporations, cities, markets, and governments are all technologies we’ve devised to manage complexity and make rational and actionable decisions in a hostile world. Steven Johnson—in his new book Farsighted—points out that we’ve evolved decision and scenario sciences to cope with increasingly complex issues—from the era of Darwin when he used the simple “pro/con” list to decide if he should get married (a non-trivial decision) to today’s advanced scenario-planning war games, science fiction foresight tools and other scalable management techniques. This time, however, seems different—for a troubling simple reason. This time we face the rise of powerful new forces that undermine our very ability to react to these challenges and disruptions: our cognition itself is under attack. These toxic new forces leverage digital technology to exploit our behavioral biases, pushed by powerful financial incentives. The early warning signs What if the structures we had built to protect us against irrational decisions turn out to be rickety breakwaters laid down on the shore of a once placid sea and provide no protection from a 100-year flood? When the art and science of decisions-making itself collapses might we face a Great Cognitive Depression? The early warning signs are troubling to say the least. Authoritarian governments and despots are enjoying a resurgence. In many democracies, voters faced with complex issues turn to simple answers and slogans, to the siren call of populism. They dismiss the experts (think of Brexit as a case in point), they look for scapegoats and easy fixes. Could these be examples of human cognition reverting to evolutionary shortcuts to cope with complex threats? Authority bias is a quick way for us to decide things when we are faced with tough choices. If something is too ambiguous or non-deterministic we follow the authority figure with the most compelling and simple story, instead of doing the thinking for ourselves. Social scientists have documented upwards of 200+ cognitive short cuts and biases that evolved to help us cope with danger, make decisions fast, and conserve our precious cognitive resources to fight another day. But sometimes those shortcuts have lived on far past their “sell by” date. Sometimes our brains lie to us. Buying behavior in our simian ancestors seem oddly similar to the ways humans make choices in markets. We believe we are rational actors but time and again we find out that it is very hard to see the thinking about our thinking. And now it’s getting harder. Here is where we find a dangerous market failure. A powerful combination of new technologies and financial incentives is fast overwhelming our old protective barriers. Digital innovations are creating value. But this value is not given away for free, as some economists contend. There is no free lunch. We all know that digital platforms are after our data. Sometimes they use it to our advantage, with more personalized offerings; often they sell it to advertisers. For them we are a different kind of “prosumer”: not a producer-consumer, but rather a product-consumer. We are more a commodity than a true customer. You might argue that well, almost everyone realizes this, and we still enter these transactions of our own free will, so what’s the problem? But digital platforms are not just after our data—they crave our unwavering attention. Higher ratings command higher advertising rates—and the ratings are determined by how much time we spend with our eyeballs glued to the screen, our attention absorbed by the apps. Therefore, these platforms have a financial incentive to hold our attention, and to grab it back whenever it drifts away—a powerful financial incentive. Hence the game of incessant notifications, of addictive updates on likes and shares, of instigations to chase followers, friends and connections. See, the fact that digital platforms grab our data in exchange for their “free” services strikes us as a lesser distortion. The digital platform, be it Google, Amazon, Twitter or Facebook, most likely gets more value from my individual data than it gives back to me in services. But the truth is, my data is much less valuable to me than it is to them, because they can aggregate it with others’, whereas I cannot. And unless I find a way to get together with millions of other users, in a sort of modern trade union of the digital sheep, I will never have enough bargaining power to extract more of that value. Because as long as everybody else gives their data away, the marginal value of my data is close to zero. But as I said, my data is of little value to me, in isolation. Little ventured, little lost in this case. Cognition is another matter. Our attention, our cognition, is a very precious resource. We need it to study, to work, to run our daily lives, to take small and big and life-changing decisions. And it’s a limited resource. We can fool ourselves that we can multitask. That we have become a lot more productive as we track our Twitter feed and social media messages while we work, answer emails during conference calls. Except that we can’t and we don’t. We become less productive, not more. The statistics—as we discussed earlier—bear this out. It should be no surprise. In this more complex world, we have a lot to study and understand—and we cannot do it in 20-seconds bursts. When we get distracted, we need over 20 minutes to refocus on the task at hand. In this more complex and high-tech world, knowledge and understanding have enormous value. The time and cognition we invest in acquiring knowledge, mastering skills, earning credentials, yields a very high rate of return in terms of career opportunities, earnings, and personal fulfillment. Which means that the opportunity cost of every minute we spend looking at a digital ad, “catching up” on various messaging platforms, or watching a viral video is extremely high. And the digital drugs we take on a daily basis not only absorb precious time today—they also erode our ability to concentrate. By pushing us to an obsessive-compulsive habit of constantly checking for something new online, they gradually destroy our slow-thinking ability (àla Kahneman), our power of concentration. Our attention spans are shortening, undermining our future productivity as well. This could easily become a vicious spiral: powerful financial incentives will keep pushing digital platforms to grab more and more of our attention. And as the Internet of Things becomes more pervasive, they will have more and more tools at their disposal: soon the mirror in your bathroom and smart dust around you as you walk down the street will also compete for your attention. At the same time, these companies’ tactics exploit deep-rooted cognitive biases: we are programmed to pay attention to anything referring to us, to look for news and new things, and to crave the approval of our community. Left to itself, this is only going to get worse. So just as we enter the most harrowing straits for ourselves and our planet, as we race to rebalance ever widening gaps between the powerful and the powerless; as we come to grips with extinction level threats to our way of lives, the structures we’ve erected to make rational decisions are collapsing. While we have new decision-making and scenario planning methodologies at our disposal, we may not have much actual brainpower to notice, care or bring our best thinking to the table. The Great Cognitive Depression is racing towards us and we don’t appear to be taking the early warning signs seriously and may not even notice before it’s too late. The counterfeit attention-based currency that is flooding our markets may soon bankrupt our cognitive reserves. Bad money (attention) drives out good, as Gresham’s Law predicts. We’ve fostered the rise of industries that are rewarded for de-cognition attacks and we have put no incentives or taxes in place to do what markets can’t or won’t do themselves. It is as if our human odyssey has been blown off course, pushed by the rising tide toward the land of the sirens, seduced by deceptive songs, hypnotized and driven towards madness. If we do nothing we may ultimately wash up on the shores from a watery grave.

#### Economic crisis sparks widespread movements towards localized sustainability.

Trainer **’**19—Conjoint Lecturer in the School of Social Sciences, University of New South Wales (Ted, “Entering the era of limits and scarcity: the radical implications for social theory,” Journal of Political Ecology Vol. 26, 2019, dml)

In time, this pressure is likely to shift from submitting requests to the state to making demands on it, and then to taking increasing control of it. There will be increasing insistence that frivolous industries must be phased out so that scarce resources can be devoted to meeting fundamental town and regional needs. Meanwhile towns will be driven by necessity to bypass the center and take initiatives such as setting up their own farms, energy supplies and factories, thus transferring various functions out of the control of the centre. There will be increasing recognition that the local is the only level where the right decisions for self-sufficient communities can be made. In time, these shifts will lead to the transfer of functions and power from state-level agencies to the local level, leaving the center with relatively few tasks, and mainly with the role of facilitating local activities. This radical restructuring could conceivably be a smooth and peaceful process, driven by a general recognition that scarcity is making local self-governing communities the only viable option. If this happens then in effect, Stage 1 will be recognized as having constituted the revolution, essentially a cultural phenomenon, and the macroscopic structural changes in Stage 2 will be seen as a consequence of the revolution. Thus a case for Anarchist theory and practice It will be evident that the alternative social organization sketched above is a fairly common Anarchist vision (although there are also varieties that are not being advocated). The argument is that settlements enabling a high quality of life for all, despite very low resource use rates, must involve all members in thoroughly participatory deliberations regarding the design, development and running of their local productive, political and social systems. Their ethos must be non-hierarchical, cooperative and collectivist, seeking to avoid all forms of domination and to prioritize the public good. They must draw on the voluntary good will and energy of conscientious citizens who are ready to contribute generously and to identify and deal with problems informally and spontaneously, and to focus on seeking mutually beneficial arrangements with little if any need for industrial infrastructures and transport networks, bureaucracy, paid officials or politicians. Regional and wider issues will be tackled by the characteristic Anarchist mechanisms of federations and (powerless) delegates bringing recommendations back down to town meetings. The principle of 'subsidiarity' is evident in the practice of grass-roots politics, the avoidance of hierarchies, and the central role of town assemblies. The very low resource costs sustainability requires are achievable because of the proximity, diversity of functions and integration, the familiarity enabling informal communication and spontaneous action, and the elimination of many processes (e.g., transport, waste dumping, fertilizer production, packaging). In the 1930s the Spanish Anarchists in the Barcelona region showed what could be done by ordinary workers and citizens. An impressive current example is the Catalan Integral Cooperative movement (Dafermos 2017; TSW 2015a). Thousands work in hundreds of different cooperatives providing hundreds of thousands of dollars worth of food, goods and services, including unemployment and other welfare services. They operate more than twenty food 'pantries' largely via voluntary labor, handling more than a thousand products. Their goal is to build an alternative society focused on meeting needs, with no involvement of the state or market principles. Many eco-villages operate according to Anarchist principles, achieving high levels of sustainability (again see Lockyer 2017 and Grinde et al. 2018). In addition it will be evident that the discussion of transition strategy also follows Anarchist principles, especially in the notion of 'prefiguring' the new here and now within the old, not depending on the centre let alone a vanguard party, and recognizing the importance of ideas and values. The advent of GFC 2 Unfortunately the foregoing transition sequence is likely to be greatly disrupted and possibly thwarted a global financial crisis of much greater magnitude than the 2008 event. It is widely recognized that the much higher levels of debt are likely to bring on at least a serious recession, and probably worse in the next few years. The global economy is heavily dependent on petroleum supply, which is been kept up by 'fracking', but this has only been made possible by enormous debt; none of the major companies in the arena has ever made a profit. Several analysts have pointed out that the price levels necessary to make the new sources of petroleum profitable now seem to be above those necessary to enable economies to function normally. In addition, Ahmed (2017) has argued persuasively that the rapidly worsening population, food, water and ecological conditions affecting Middle Eastern petroleum suppliers are increasing their chances of becoming failed states. Meanwhile the proportion of their petroleum production they must use internally is increasing, adding to the possibility that their capacity to export will dry up within a decade. These and other deteriorating resource and ecological conditions (especially falling Energy Return on Energy Invested rates) are likely to trigger serious global economic disruption long before localist initiatives have been well enough established. Yet it is very unlikely that the kind of transition envisaged could begin unless there is major breakdown in the existing consumer-capitalist system. As long as it keeps the supermarket shelves stocked, discontent is likely to be muted, and focused on demands for more jobs and higher incomes rather than system replacement. The Goldilocks