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#### Biotech industry strong now – new innovation and R&D coming

Cancherini et al. 4/30 [Laura, Engagement Manager @ McKinsey & Company, Joseph Lydon, Associate Partner @ McKinsey & Company, Jorge Santos Da Silva, Senior Partner at McKinsey & Company, and Alexandra Zemp, Partner at McKinsey & Company] “What’s ahead for biotech: Another wave or low tide?“, McKinsey & Company, 4-30-2021, <https://www.mckinsey.com/industries/pharmaceuticals-and-medical-products/our-insights/whats-ahead-for-biotech-another-wave-or-low-tide> //ajs

As the pandemic spread across the globe in early 2020, biotech leaders were initially pessimistic, reassessing their cash position and financing constraints. When McKinsey and BioCentury interviewed representatives from 106 biotech companies in May 2020,4 half of those interviewed were expecting delays in financing, and about 80 percent were tight on cash for the next two years and considering trade-offs such as deferring IPOs and acquisitions. Executives feared that valuations would decline because of lower revenue projections and concerns about clinical-trial delays, salesforce-effectiveness gaps, and other operational issues.

Belying this downbeat mood, biotech has in fact had one of its best years so far. By January 2021, venture capitalists had invested some 60 percent more than they had in January 2020, with more than $3 billion invested worldwide in January 2021 alone.5 IPO activity grew strongly: there were 19 more closures than in the same period in 2020, with an average of $150 million per raise, 17 percent more than in 2020. Other deals have also had a bumper start to 2021, with the average deal size reaching more than $500 million, up by more than 66 percent on the 2020 average (Exhibit 3).6

What about SPACs?

The analysis above does not include special-purpose acquisition companies (SPACs), which have recently become significant in IPOs in several industries. Some biotech investors we interviewed believe that SPACs represent a route to an IPO. How SPACs will evolve remains to be seen, but biotechs may be part of their story.

Fundamentals continue strong

When we asked executives and investors why the biotech sector had stayed so resilient during the worst economic crisis in decades, they cited innovation as the main reason. The number of assets transitioning to clinical phases is still rising, and further waves of innovation are on the horizon, driven by the convergence of biological and technological advances.

In the present day, many biotechs, along with the wider pharmaceutical industry, are taking steps to address the COVID-19 pandemic. Together, biotechs and pharma companies have [more than 250 vaccine candidates in their pipelines](https://www.mckinsey.com/industries/pharmaceuticals-and-medical-products/our-insights/on-pins-and-needles-will-covid-19-vaccines-save-the-world), along with a similar number of therapeutics. What’s more, the crisis has shone a spotlight on pharma as the public seeks to understand the roadblocks involved in delivering a vaccine at speed and the measures needed to maintain safety and efficacy standards. To that extent, the world has been living through a time of mass education in science research and development.

Biotech has also benefited from its innate financial resilience. Healthcare as a whole is less dependent on economic cycles than most other industries. Biotech is an innovator, actively identifying and addressing patients’ unmet needs. In addition, biotechs’ top-line revenues have been less affected by lockdowns than is the case in most other industries.

Another factor acting in the sector’s favor is that larger pharmaceutical companies still rely on biotechs as a source of innovation. With the [top dozen pharma companies](https://www.mckinsey.com/business-functions/m-and-a/our-insights/a-new-prescription-for-m-and-a-in-pharma) having more than $170 billion in excess reserves that could be available for spending on M&A, the prospects for further financing and deal making look promising.

For these and other reasons, many investors regard biotech as a safe haven. One interviewee felt it had benefited from a halo effect during the pandemic.

More innovation on the horizon

The investors and executives we interviewed agreed that biotech innovation continues to increase in quality and quantity despite the macroeconomic environment. Evidence can be seen in the accelerating pace of assets transitioning across the development lifecycle. When we tracked the number of assets transitioning to Phase I, Phase II, and Phase III clinical trials, we found that Phase I and Phase II assets have transitioned 50 percent faster since 2018 than between 2013 and 2018, whereas Phase III assets have maintained much the same pace. There could be many reasons for this, but it is worth noting that biotechs with Phase I and Phase II assets as their lead assets have accounted for more than half of biotech IPOs. Having an early IPO gives a biotech earlier access to capital and leaves it with more scope to concentrate on science.

Looking forward, the combination of advances in biological science and accelerating developments in technology and artificial intelligence has the potential to take innovation to a new level. A [recent report](https://www.mckinsey.com/industries/pharmaceuticals-and-medical-products/our-insights/the-bio-revolution-innovations-transforming-economies-societies-and-our-lives) from the McKinsey Global Institute analyzed the profound economic and social impact of biological innovation and found that biomolecules, biosystems, biomachines, and biocomputing could collectively produce up to 60 percent of the physical inputs to the global economy. The applications of this “Bio Revolution” range from agriculture (such as the production of nonanimal meat) to energy and materials, and from consumer goods (such as multi-omics tailored diets) to a multitude of health applications.

#### Secondary patents are necessary for innovation of otherwise mediocre drugs—core to cancer and HIV treatments

**Holman 2018** (Christopher, Professor of Law, University of Missouri-Kansas City School of Law. “Why Follow-On Pharmaceutical Innovations Should Be Eligible For Patent Protection” <https://www.ip-watch.org/2018/09/21/follow-pharmaceutical-innovations-eligible-patent-protection/> September 21, 2018)DR 21

The attack on secondary pharmaceutical patents is based in part on the flawed premise that follow-on innovation is of marginal value at best, and thus less deserving of protection than the primary inventive act of identifying and validating a new drug active ingredient. In fact, follow-on innovation can play a critical role in transforming an interesting drug candidate into a safe and effective treatment option for patients. A good example can be seen in the case of AZT (zidovudine), a drug ironically described in the Guidelines as the “first breakthrough in AIDS therapy.” AZT began its life as a failed attempt at a cancer drug, and it was **only years later that its potential application in the fight against AIDS was realized**. Follow-on research resulted in **a method-of-use patent** directed towards the use of AZT in the treatment of AIDS, and it was this patent that incentivized the investment necessary to bridge the gap between a promising drug candidate and a safe, effective, and FDA-approved pharmaceutical. Significantly, because of the long lag time between the first public disclosure of AZT and the discovery of its use in the treatment of AIDS, patent protection for the molecule per se was unavailable. In a world where follow-on innovation is unpatentable, there would have been no patent incentive to invest in the development of the drug, and without that incentive AZT might have languished on the shelf as simply one more failed drug candidate.

Other examples of important drugs that likely never would have been made available to patients without the availability of a “secondary” patent include Evista (raloxifene, **used in the treatment of** osteoporosis and to reduce the risk of invasive breast cancer), Zyprexa (olanzapine, used in the treatment of schizophrenia), and an orally-administrable formulation of the antibiotic cefuroxime.

Pharmaceutical development is prolonged and unpredictable, and frequently a safe and effective drug occurs only as a result of follow-on innovation occurring long after the initial synthesis and characterization of a pharmaceutically interesting chemical compound. The inventions protected by secondary patents can be just as critical to the development of drugs as a patent on **the active ingredient itself.**

#### One and done model kills innovation—chilling effect

**Magiera 2021** (Melissa S., J.D. Candidate, 2021, Indiana UniversityRobert H. McKinney School of Law; B.S. 2017, Indiana University Purdue University Indianapolis – Indianapolis, Indiana. Recipient of the Papke Prize for Best Note in Volume 54, endowed by and named in honor of David R. Papke, former R. Bruce Townsend Professor of Law and faculty advisor to the Indiana Law Review “Leaving the Evergreening Problem to the Patent Experts--The USPTO, the PTAB, and the Federal Circuit” Indiana Law Review, 54(1), 195-220.)DR 21

Additionally, the pharmaceutical industry spends millions of dollars in researching new uses or safer ways to administer known drugs.94 A new use or method of administering or making a known drug should be rewarded with a patent; if not, many pharmaceutical companies will treat the discovered drugs as “one-and-dones.” 95 Patents are meant to be issued for innovations, not for products.96 Just because a patent is granted on a medicine does not mean that the innovation relating to the drug ends; in fact, many pharmaceutical companies continue to research “new ways to make the medicine, new populations who can benefit from its use, better ways to get it to and into patients, and new versions that expand options for patents.” 97 The effect of this legislation, if enacted, likely would be to focus on lowering the price of medicine for patients at the cost of denying rightful patents to pharmaceutical companies that could have made new medical advances for the good of society. 98 Any pharmaceutical company would be scrutinized for any additional innovation of a drug and may be subject to penalties.99 Eventually, this means that the pharmaceutical companies could halt further research on any patented drug, even if there is a better, undiscovered use for that drug. 100 If enacted, the legislation could also “erode[] incentives and threaten[] innovation,” which is what the patent system was created to protect. 101

#### Expectation of decreased market demand shifts funding away from R&D

Scherer ‘1 [F.M. Scherer](http://content.healthaffairs.org/search?author1=F.M.+Scherer&sortspec=date&submit=Submit), Health Affairs, The Link Between Gross Profitability And Pharmaceutical R&D Spending,  September 2001 vol. 20 no. 5 216-220, http://content.healthaffairs.org/content/20/5/216.long

Second, the profits earned by a company serve as a source of funds to support R&D investments, and some managers are known to set R&D budgets using rules of thumb emphasizing an indicator of current cash flow or sales. To be sure, as recent experience in biotechnology shows, funds for R&D can also be raised through new capital issues. Prior tests of the hypothesis of internally generated funds have yielded mixed results. For most well-established corporations, R&D spending is not greatly dependent upon internal cash flow, but small high-tech enterprises—before the 1990s venture capital boom—and the research-intensive pharmaceutical industry were probable exceptions.[2](http://content.healthaffairs.org/content/20/5/216.long#ref-2) Third, managers’ expectations of future profit opportunities, which are tempered, inter alia, by contemporary market conditions, can exert a demand-pull influence on R&D investments

#### Big pharma relies on evergreening as a major source of profit—empirics prove.

Chandler 15

Dr. Kelley Chandler, J.D. (B.S., Villanova University, 2015; J.D., Cornell Law School, 2020; Executive Editor, Cornell Journal of Law and Public Policy, Vol. 29); “PATENTS AND THE PHARMACEUTICAL INDUSTRY: CURBING THE ABUSIVE PRACTICES EMPLOYED BY BLOCKBUSTER DRUG COMPANIES TO PROLONG MARKET EXCLUSIVITY”; CORNELL JOURNAL OF LAW AND PUBLIC POLICY [Vol. 29:467]; 2015; <https://ww3.lawschool.cornell.edu/research/JLPP/upload/Chandler-note-final.pdf>; EMJ

1. Evergreening The practice of evergreening is described as “obtaining multiple patents that cover different aspects of the same product,” which has the effect of extending the patent term of the drug in question.83 Evergreening may take the form of acquiring additional patents on the active ingredients, methods of manufacturing, formulations, or chemical intermediates of a drug, to name a few.84 When a company first files a patent application on the active ingredient, its patent will be set to expire 20 years from the filing date.85 However, if the company files an application for a secondary patent five years later based upon a secondary feature of the drug, such as an improved method of manufacturing, the approval of the secondary patent will prevent a generic company from using that method until the secondary patent expires.86 The practical effect of this strategy is that a generic company seeking to enter the market will not be able to use the method of manufacture until the end of the second patent term, five years after the original patent term has expired.87 Although a generic company is free to produce and sell the active ingredient once the patent on that ingredient expires, development of a generic drug is often difficult and costly without the ability to employ certain manufacturing methods.88 In this way, brand companies build a “patent portfolio” around single drugs as a creative way to avoid surrendering market exclusivity due to primary patent expiration.89 Studies show that evergreening has increased significantly since Hatch-Waxman passed.90 Features of a drug which are covered by a secondary patent are considered “peripheral”91 and include things such as tablet coating or products produced from drug ingestion, dosages, or delivery routes.92 For example, the patent application for the active ingredient of the drug Paxil, which is used to treat depression, was filed on December 17, 1974.93 Of the several peripheral patent applications that were filed, the most recent patent was filed in 1998.94 If a generic had not succeeded in Paragraph IV litigation in 2003, this would have given Paxil an additional sixteen years of patent term exclusivity beyond the initial 20 years.95 Even given the generic challenger’s success, Paxil’s developers still enjoyed years of exclusivity beyond the original patent term due to their peripheral patents.96 Similarly, peripheral patents on internal coatings for the heartburn drug, Prilosec, afforded the manufacturer extra market exclusivity.97 Through strategically staggering patent applications on active drug ingredients and incremental drug improvements, a brand company can very “effectively extend the aggregate period of patent protection that applies to that product”98 even where the patent is later invalidated.99 Another consequence of the Hatch-Waxman Act on evergreening practice was that brand companies were being granted multiple 30-month stays on generic approval by the FDA.100 Before the generic’s approval, brands could acquire secondary patents and list them in the Orange Book, triggering an obligation for the generic to certify a challenge to the new patent and notify the brand of their intent to continue to market.101 Because this notification provided the brand company with the right to initiate a lawsuit, companies could plan their patent applications strategically in order to be able to file multiple lawsuits so as to trigger a new 30-month stay months after the existing 30-month stay began to run, giving the brand extra exclusivity through precluding generic approval at the FDA.102 Congress addressed this issue in 2003 through an amendment to the Hatch-Waxman Act, known as the Medicare Modernization Act, which prohibits multiple 30-month stays.103 Despite this change, evergreening remains a significant issue in the pharmaceutical space because secondary patents “remain enforceable proprietary rights against generic firms”104 which “increase the infringement minefield that generics must navigate when bringing a product to market.”105 The costs to society are rising drug prices and reduced access to necessary treatments.106 2. Product Hopping A related strategy within the evergreening category is the practice of product hopping, which denotes the brand-company practice of making an incremental change to a blockbuster drug which will soon be facing patent expiry, “secur[ing] patents on that new formulation, and then discontinu[ing]” the first drug.107 This takes place before any generics are on the market, and is usually combined with an aggressive marketing scheme in order to promote the new drug to consumers and physicians.108 Once the new drug has permeated the market, people are less likely to switch again, even if a generic alternative becomes available.109 Further, as Arti Rai and Barak Richman noted in their May 2018 article, because the new drug is not “therapeutically equivalent” to the old formation, State-level drug substitution laws that allow pharmacists to substitute generic drugs prevent substitution of the generic version of Drug 1 for Drug 2 prescriptions. In short, patients . . . pay monopoly prices for a branded Drug 2 because there is no generic alternative, and the market for Drug 1 evaporates just as a generic becomes available.110 Prilosec is a potent example of product hopping because the manufacturer successfully introduced an ostensibly new and improved version of Prilosec, widely known as “Nexium,” and influenced the market to “hop” before the patent expired on Prilosec.111 Although Prilosec was not completely withdrawn from the market, the manufacturer switched it from the prescription market to the over-the-counter market, and pharmacists were not able to substitute generic Prilosec for prescription Nexium due to the fact that they were technically different.112 While it is true that patients sometimes have the option to purchase the cheaper drug or the over-the-counter version when it remains on the market, the fact that pharmaceuticals represent a “unique market with noticeable information asymmetry” makes this much less likely.113 Additionally, because doctors are not actually purchasing the drugs, cost considerations are often overlooked when they are writing prescriptions, and they may have other incentives that factor into their decisions.114 3. The New Business Model Given the stakes, it is no surprise that brand pharmaceutical companies are increasingly turning to evergreening strategies to gobble up more market exclusivity for their blockbuster drugs.115 In the year 2000 alone, Prilosec’s manufacturer, AstraZeneca, reported that the drug brought in $6.3 billion,116 which is a substantial percentage of their overall revenue of $15.8 billion during that year.117 Due to the sheer amount of revenue that brand-pharmaceutical companies stand to gain or lose, it is reasonable to conclude that there is a new business model that pervades the pharmaceutical market.118 This model consists largely of evergreening and product hopping practices “turning out scores of minor variations, some of which become market blockbusters”119 which then “generate steady profits throughout the ups and downs of blockbusters coming off patents.”120 Notwithstanding that one of the goals of Hatch-Waxman was to spur brand companies to truly innovate and pioneer NCEs, only a miniscule percentage of brand company expenditures go towards researching new molecules.121 However, it would seem that the Hatch-Waxman Act lead to a pharmaceutical market which now “depend[s] less on the breakthrough research that executives emphasize than on rational actors exploiting ever broader and longer patents and other government protections against normal free market competition.”122 Contrary to Congressional intent, evergreeing and product hopping issues have only been exacerbated in the post-Hatch-Waxman atmosphere.123 It seems more and more that “when patent law realities are combined with…rational business decisions, all considerations point towards a focus on incremental drugs.”124 Hence, the new business model.125

#### Biopharmaceutical innovation is key to prevent future pandemics and bioterror – turns case

Marjanovic and Feijao 20 [(Sonja Marjanovic, Ph.D., Judge Business School, University of Cambridge. Carolina Feijao, Ph.D. in biochemistry, University of Cambridge; M.Sc. in quantitative biology, Imperial College London; B.Sc. in biology, University of Lisbon.) "How to Best Enable Pharma Innovation Beyond the COVID-19 Crisis," RAND Corporation, 05-2020, https://www.rand.org/pubs/perspectives/PEA407-1.html] TDI

As key actors in the healthcare innovation landscape, pharmaceutical and life sciences companies have been called on to develop medicines, vaccines and diagnostics for pressing public health challenges. The COVID-19 crisis is one such challenge, but there are many others. For example, MERS, SARS, Ebola, Zika and avian and swine flu are also infectious diseases that represent public health threats. Infectious agents such as anthrax, smallpox and tularemia could present threats in a bioterrorism context.1 The general threat to public health that is posed by antimicrobial resistance is also well-recognised as an area in need of pharmaceutical innovation. Innovating in response to these challenges does not always align well with pharmaceutical industry commercial models, shareholder expectations and competition within the industry. However, the expertise, networks and infrastructure that industry has within its reach, as well as public expectations and the moral imperative, make pharmaceutical companies and the wider life sciences sector an indispensable partner in the search for solutions that save lives. This perspective argues for the need to establish more sustainable and scalable ways of incentivising pharmaceutical innovation in response to infectious disease threats to public health. It considers both past and current examples of efforts to mobilise pharmaceutical innovation in high commercial risk areas, including in the context of current efforts to respond to the COVID-19 pandemic. In global pandemic crises like COVID-19, the urgency and scale of the crisis – as well as the spotlight placed on pharmaceutical companies – mean that contributing to the search for effective medicines, vaccines or diagnostics is essential for socially responsible companies in the sector. 2 It is therefore unsurprising that we are seeing industry-wide efforts unfold at unprecedented scale and pace. Whereas there is always scope for more activity, industry is currently contributing in a variety of ways. Examples include pharmaceutical companies donating existing compounds to assess their utility in the fight against COVID19; screening existing compound libraries in-house or with partners to see if they can be repurposed; accelerating trials for potentially effective medicine or vaccine candidates; and in some cases rapidly accelerating in-house research and development to discover new treatments or vaccine agents and develop diagnostics tests.3,4 Pharmaceutical companies are collaborating with each other in some of these efforts and participating in global R&D partnerships (such as the Innovative Medicines Initiative effort to accelerate the development of potential therapies for COVID-19) and supporting national efforts to expand diagnosis and testing capacity and ensure affordable and ready access to potential solutions.3,5,6 The primary purpose of such innovation is to benefit patients and wider population health. Although there are also reputational benefits from involvement that can be realised across the industry, there are likely to be relatively few companies that are ‘commercial’ winners. Those who might gain substantial revenues will be under pressure not to be seen as profiting from the pandemic. In the United Kingdom for example, GSK has stated that it does not expect to profit from its COVID-19 related activities and that any gains will be invested in supporting research and long-term pandemic preparedness, as well as in developing products that would be affordable in the world’s poorest countries.7 Similarly, in the United States AbbVie has waived intellectual property rights for an existing combination product that is being tested for therapeutic potential against COVID-19, which would support affordability and allow for a supply of generics.8,9 Johnson & Johnson has stated that its potential vaccine – which is expected to begin trials – will be available on a not-for-profit basis during the pandemic.10 Pharma is mobilising substantial efforts to rise to the COVID-19 challenge at hand. However, we need to consider how pharmaceutical innovation for responding to emerging infectious diseases can best be enabled beyond the current crisis. Many public health threats (including those associated with other infectious diseases, bioterrorism agents and antimicrobial resistance) are urgently in need of pharmaceutical innovation, even if their impacts are not as visible to society as COVID-19 is in the immediate term. The pharmaceutical industry has responded to previous public health emergencies associated with infectious disease in recent times – for example those associated with Ebola and Zika outbreaks.11 However, it has done so to a lesser scale than for COVID-19 and with contributions from fewer companies. Similarly, levels of activity in response to the threat of antimicrobial resistance are still low.12 There are important policy questions as to whether – and how – industry could engage with such public health threats to an even greater extent under improved innovation conditions.

#### COVID incentivizes engineered bioterror- extinction

Walsh, 20 -- Axios Future correspondent [Bryan Walsh, "The coronavirus pandemic reawakens bioweapon fears," Axios, 5-14-2020, https://www.axios.com/coronavirus-pandemic-pathogen-bioweapon-45417c86-52aa-41b1-8a99-44a6e597d3a8.html, accessed 9-7-2020]

The coronavirus pandemic reawakens bioweapon fears

The immense human and economic toll of the COVID-19 pandemic only underscores the threat posed by pathogens that could be deliberately engineered and released.

Why it matters: New technology like gene editing and DNA synthesis has made the creation of more virulent pathogens easier. Yet security and regulation efforts haven't kept pace with the science.

What's happening: Despite some claims by the White House, overwhelming scientific evidence indicates that the novel coronavirus was not accidentally released from a lab or deliberately engineered, but naturally spilled over from an animal source.

That doesn't mean the threat from bioweapons isn't dire. Along with AI, engineered pandemics are widely considered the biggest existential risk facing humanity.

That's in part because a pathogen could be engineered in a lab for maximum contagiousness and virulence, well beyond what would arise through natural selection.

Case in point: a 2018 pandemic simulation put on by the Johns Hopkins Center for Health Security featured a fictional engineered virus called Clade X that combined the contagiousness of the common cold with the virulence of the real-life Nipah virus, which has a mortality rate of 40-75%. The resulting simulated global outbreak killed 150 million people.

COVID-19 isn't anywhere near that fatal, but the pandemic has shown the vulnerability of the U.S. and the world to biological threats both natural and manmade.

"Potential adversaries are of course seeing the same things we’re seeing," says Richard Pilch of the Middlebury Institute of International Studies. "Anyone looking for a radical leveling approach — whether a state actor like North Korea or a motivated terrorist organization — may be influenced by COVID-19 to consider pursuing a biological weapons capability."

Background: Bioweapons were officially banned by the Biological Weapons Convention in 1975, though North Korea is suspected of maintaining an offensive bioweapons program.

A particular concern about biowarfare and bioterror, though, is that many of the tools and methods that could be used to create a weaponized virus are largely indistinguishable from those used in the course of legitimate scientific research. This makes biotechnology "dual-use" — and that much more difficult to safely regulate without cutting off research that could be vitally important.

While earlier bioweapons fears focused on the possibility that a state or terror group could try to weaponize a known dangerous agent like smallpox — which would require somehow obtaining restricted pathogens — new technology means that someone could obtain the genetic sequence of a germ online and synthesize it in the lab.

"If you've been trained in a relevant technical discipline, that means you can make almost any potentially harmful agent that you're aware of," says Kevin Esvelt, a biologist at the MIT Media Lab and a member of the CDC's Biological Agent Containment Working Group. That would include the novel coronavirus that causes COVID-19, which was recently synthesized from its genetic sequence in a study published in Nature.

How it works: Currently, synthetic DNA is ordered through commercial suppliers. But while most suppliers screen DNA orders for the sequences of dangerous pathogens, they're not required to — and not all do, which means safety efforts are "incomplete, inaccurate, and insecure," says Esvelt.

Screening efforts that look for the genetic sequences of known pathogens also wouldn't necessarily be able to detect when synthetic DNA was being used to make something entirely novel and dangerous.

In the near future, desktop DNA synthesizers may be able to generate synthetic DNA in the lab, cutting out the need for commercial suppliers — and potential security screenings.

The democratization of biotechnology could unleash a wave of creativity and innovation, just as the democratization of personal computing did. But it also increases the number of people who could potentially make a dangerous engineered virus, whether deliberately or by accident.

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#### Counterplan Text – Member states of the World Trade Organization ought to consult the World Health Organization on whether or not to [do the Plan]. The World Health Organization ought to publicly declare that their decision on [the Plan] will represent their future decisions on all intellectual property protections on medicines.

#### The Plan’s unilateral action by the WTO on medical IP undermines WHO legitimacy – forcing a perception of WHO action against Patents is key to re-assert it – they say yes.

Rimmer 4, Matthew. "The race to patent the SARS virus: the TRIPS agreement and access to essential medicines." Melbourne Journal of International Law 5.2 (2004): 335-374.

<https://law.unimelb.edu.au/__data/assets/pdf_file/0007/1681117/Rimmer.pdf> (BA (Hons), LLB (Hons) (Australian National University), PhD (New South Wales); Lecturer at ACIPA, the Faculty of Law, The Australian National University)//SidK + Elmer

The WHO has been instrumental in coordinating the international network of research on the SARS virus. It has emphasised the need for collaboration between the network participants. The WHO presented the containment of the SARS virus as ‘one of the biggest success stories in public health in recent years’.206 However, it **was less active in the debate over patent law** and public health epidemics. The 56th World Health Assembly considered the relationship between intellectual property, innovation and public health. It stressed that in order to tackle new public health problems with international impact, such as the emergence of severe acute respiratory syndrome (SARS), access to new medicines with potential therapeutic effect, and health innovations and discoveries should be universally available without discrimination.207 However, there was much disagreement amongst the member states as to what measures would be appropriate. The WHO has made a number of **aspirational statements** about patent law and access to essential medicines. Arguably, though, the organisation could be a much more informed and vocal advocate. Initially, the WHO did not view the patent issues related to SARS as being within its field of activities. The agency **did not even seem aware of the patent proceedings**, leaving individual research institutions without guidance. Spokesman Dick Thompson said: ‘What we care about is [that] the international collaboration continues to function. Patents, they don’t really concern us’.208 The director of WHO’s Global Influenza project, Klaus Stöhr, expressed his opinion that the patent filings would not interfere with the international cooperation on the SARS research: ‘I don’t think this will undermine the collaborative spirit of the network of labs’.209 However, he believed that, after the international network of researchers had identified the coronavirus, it was necessary to rely upon companies to commercialise such research. Klaus Stöhr conceded: ‘At a certain point of time you have to give way for competitive pharmaceutical companies’.210 On a policy front, the WHO **remained deferential** to the WTO over the debate over patent law and access to essential medicines, observing: Owing to the inconclusive nature of the studies conducted to date, and because of the effect that potentially significant price increases could have on access to drugs in poor countries, WHO is currently monitoring and evaluating the effects of TRIPS on the prices of medicines. It is also monitoring the TRIPS impact on other important issues such as transfer of technology, levels of research and development for drugs for neglected diseases, and the evolution of generic drug markets.211 In such a statement, the WHO appears diffident, **unwilling to take on more than a spectator** role. Such a position is arguably too timid, given the gravity of national emergencies, such as the SARS virus. The organisation could take a much stronger stance on the impact of the **TRIPS** Agreement on public health concerns. The WHO has since enunciated a position statement on the patenting of the SARS virus. A number of high ranking officials from the organisation have commented on the need to ensure that international research into the SARS virus is not impeded by competition over patents. Arguably though, the **WHO should not be limited to a mere spectator role in such policy discussions. It needs to play an active advocacy role in the debate over patent law and access to essential medicines**. The WHO released a position statement on ‘Patent Applications for the SARS Virus and Genes’ on 29 May 2003.212 The organisation stressed that it had no per se objection to the patenting of the SARS virus: Some people have objected to the SARS patent applications on the ground that the virus and its genes should not be patentable because they are mere discoveries, not inventions. This distinction no longer prevents the granting of patents; the novel claim rests not with the virus itself but with its isolation, and likewise with the identification of the genetic sequence not its mere occurrence. Many patents have been issued on viruses and genetic sequences, though the appropriate policies to follow in such cases — particularly as genomic sequencing becomes more routine and less ‘inventive’ — remain matters of dispute.213 Furthermore, it recognised that public institutions could legitimately use patents as a defensive means to prevent undue commercial exploitation of the research: The “defensive” use of patents can be a legitimate part of researchers’ efforts to make their discoveries (and further discoveries derived therefrom) widely available to other researchers, in the best collaborative traditions of biomedical science.214 The WHO affirmed the need for further cooperation between research organisations in respect of the SARS virus: ‘For continued progress against SARS, it is essential that we nurture the spirit of the unprecedented, global collaboration that rapidly discovered the novel virus and sequenced its genome’.215 The WHO announced its intention to monitor the effects of patents (and patent applications) on the speed with which SARS diagnostic tests, treatments, and vaccines are developed and made available for use, and on the manner in which prices are set for these technologies. It observed: In the longer term, the manner in which SARS patent rights are pursued could have a profound effect on the willingness of researchers and public health officials to collaborate regarding future outbreaks of new infectious diseases. WHO will therefore examine whether the terms of reference for such collaborations need to be modified to ensure that the credit for any intellectual property developed is appropriately attributed, that revenues derived from licensing such property are devoted to suitable uses, and that legitimate rewards for innovative efforts do not impose undue burdens on efforts to make tests, therapies, and preventive measure available to all.216 It maintained that in order to tackle new public health problems with international impact, such as the emergence of severe acute respiratory syndrome (SARS), access to new medicines with potential therapeutic effect, and health innovations and discoveries should be universally available without discrimination.219 The Assembly requested that the Director-General continue to support Member States in the exchange and transfer of technology and research findings, according high priority to access to antiretroviral drugs to combat HIV/AIDS and medicines to control tuberculosis, malaria and other major health problems, in the context of paragraph 7 of the Doha Declaration which promotes and encourages technology transfer.220 The WHO also considered a report on the emergence of the SARS virus and the international response to the infectious disease.221 It was ‘deeply concerned that SARS ... poses a serious threat to global health security, the livelihood of populations, the functioning of health systems, and the stability and growth of economies’.222 The Committee on Infectious Diseases requested that the Director-General ‘mobilize global scientific research to improve understanding of the disease and to develop control tools such as diagnostic tests, drugs and vaccines that are accessible to and affordable by Member States’.223 The Director-General of the WHO, Dr Gro Harlem Brundtland, **told the World Health** Assembly that there was a need to build trust and forge solidarity in the face of public health epidemics: ‘**Ensuring that patent regimes stimulate research and do not hinder international scientific cooperation** is a critical challenge — whether the target is SARS or any other threat to human health’.224 Similarly, Dr Marie-Paule Kieny, Director of the WHO Initiative for Vaccine Research, said: If we are to develop a SARS vaccine more quickly than usual, we have to continue to work together on many fronts at once, on scientific research, intellectual property and patents issues, and accessibility. It is a very complicated process, involving an unprecedented level of international cooperation, which is changing the way we work.225 She emphasised that patents and intellectual property issues and their safeguards can help rather than hinder the rapid development of SARS vaccines and ensure that, once developed, they are available in both industrialised and developing countries.226 C Summary The WHO should play a much more active role in the policy debate over patent law and access to essential medicines. James Love, the director of the Consumer Project on Technology, run by Ralph Nader, is critical of the WHO statement on ‘Intellectual Property Rights, Innovation, and Public Health’.227 He maintains that the Assembly could have addressed ‘practical examples, like SARS’ and cites the report in The Washington Post that notes that a number of commercial companies are investing in SARS research.228 The non-government organisation Médecins Sans Frontières has been critical in the past of the passive role played by the WHO in the debate over access to essential medicines: ‘As the world’s leading health agency, and armed with the clear mandate of recent World Health Assembly resolutions, the WHO can and should **do much more’**.229 The WHO should become a vocal advocate for public health concerns at the WTO and its TRIPS Council — especially in relation to patent law and the SARS virus. It must staunchly defend the rights of member states to incorporate measures in their legislation that protect access to medicines — such as compulsory licensing, parallel imports, and measures to accelerate the introduction of generic pharmaceutical drugs. It needs to develop a clearer vision on global equity pricing for essential medicines. The race to patent the SARS virus seems to be an inefficient means of allocating resources. A number of public research organisations — including the BCCA, the CDC and HKU — were compelled to file patents in respect of the genetic coding of the SARS virus. Such measures were promoted as ‘defensive patenting’ — a means to ensure that public research and communication were not jeopardised by commercial parties seeking exclusive private control. However, there are important drawbacks to such a strategy. The filing of patents by public research organisations may be prohibitively expensive. It will also be difficult to resolve the competing claims between the various parties — especially given that they were involved in an international research network together. Seth Shulman argues that there is a need for international cooperation and communication in dealing with public health emergencies such as the SARS virus: The success of a global research network in identifying the pathogen is an example of the huge payoff that can result when researchers put aside visions of patents and glory for their individual laboratories and let their work behave more like, well, a virus. After all, the hallmark of an opportunistic virus like the one that causes SARS is its ability to spread quickly. Those mounting a response need to disseminate their information and innovation just as rapidly.230 There is a danger that such competition for patent rights may undermine trust and cooperation within the research network. Hopefully, however, such concerns could be resolved through patent pooling or joint ownership of patents. Furthermore, a number of commercial companies have filed patent applications in respect of research and development into the SARS virus. There will be a need for cooperation between the public and private sectors in developing genetic tests, vaccines, and pharmaceutical drugs that deal with the SARS virus. There is also a need to reform the patent system to deal with international collaborative research networks — such as that created to combat the SARS virus. Several proposals have been put forward. There has been a renewed debate over whether patents should be granted in respect of genes and gene sequences. Some commentators have maintained that the SARS virus should fall within the scope of patentable subject matter — to promote research and development in the field. However, a number of critics of genetic technology have argued that the SARS virus should not be patentable because it is a discovery of nature, and a commercialisation of life. There has been a discussion over the lack of harmonisation over the criteria of novelty and inventive step between patent regimes. As Peter Yu comments, ‘[w]hile [the] US system awards patents to those who are the first to invent, the European system awards patents to those who are the first to file an application’.231 There have been calls for the requirement of utility to be raised. There have also been concerns about prior art, secret use and public disclosure. Representative Lamar Smith of Texas has put forward the CREATE Act, which recognises the collaborative nature of research across multiple institutions. Such reforms are intended to ensure that the patent system is better adapted to deal with the global nature of scientific inquiry. The race to patent the SARS virus also raises important questions about international treaties dealing with access to essential medicines. The public health epidemic raises similar issues to other infectious diseases — such as AIDS, malaria, tuberculosis, influenza, and so forth. The WHO made a public statement about its position on the patenting of the SARS virus. It has stated that it will continue to monitor developments in this field. Arguably, there is a need for the WHO to play a larger role in the debate **over patent law and** access to essential medicines. **Not only could it mediate legal disputes** over patents in respect of essential medicines, it could be a vocal advocate in policy discussions. The WTO has also played an important role in the debate over patent law and access to essential medicines. A number of public interest measures could be utilised to secure access to patents relating to the SARS virus including compulsory licensing, parallel importation and research exceptions. The appearance of the SARS virus shows that there should be an open-ended interpretation of the scope of diseases covered by the Doha Declaration on the TRIPS Agreement and Public Health. Important lessons should be learned from the emergence of the SARS virus, and the threat posed to global health. As the World Health Report 2003 notes: SARS will not be the last new disease to take advantage of modern global conditions. In the last two decades of the 20th century, new diseases emerged at the rate of one per year, and this trend is certain to continue. Not all of these emerging infections will transmit easily from person to person as does SARS. Some will emerge, cause illness in humans and then disappear, perhaps to recur at some time in the future. Others will emerge, cause human illness and transmit for a few generations, become attenuated, and likewise disappear. And still others will emerge, become endemic, and remain important parts of our human infectious disease ecology.232 Already, in 2004, there have been worries that pharmaceutical drug companies and patent rights are impeding efforts to prevent an outbreak of bird flu — avian influenza.233 There is a need to ensure that the patent system is sufficiently flexible and adaptable to cope with the appearance of new infectious diseases.234

#### WHO Cred key to Global Right to Health – medicine access is critical.

* Note the Bottom Paragraph is at the bottom of the PDF – I put a paragraph break to indicate it as such – no words are missing.

Bluestone 3, Ken. "Strengthening WHO's position should be a priority for the new Director-General." The Lancet 361.9351 (2003): 2. (Senior Policy Adviser, Voluntary Service Overseas (VSO))//Elmer

To meet these challenges, WHO must strengthen its resolve to maintain its **independence and lead its member states**, **even at the risk of causing controversy**. A meaningful example is the role that WHO can have in **ensuring access to medicines** for the world’s poorest people. WHO is the only global institution that has the **remit to drive this agenda forward**, yet has failed to do so convincingly. The new Director-General must support and reinvigorate the advocacy efforts of the organisation and provide a proper counterbalance to the interests of the pharmaceutical industry and wealthy member states. As the new Director-General takes office, they will face the dual challenge of **seeing that** the broadest possible public health interpretation of the World Trade Organization’s Doha Agreement on Trade Related Aspects on Intellectual Property Rights (TRIPS) **is not lost, and** of seizing an opportunity to bring about an international framework for sustainable and predictable tiered pricing of medicines. Without the active intervention of a public health advocate at the level of WHO, there is a risk that both of these initiatives **could founder.** Some people in positions of power still do not have high expectations of WHO or its new Director-General. But for the world’s poorest people, the overwhelming majority of whom live in developing countries, this person’s legacy could literally make the difference between life and death. Ken Bluestone Senior Policy Adviser, Voluntary Service Overseas (VSO)

New leader should re-establish WHO’s credibility The credibility of WHO’s advocacy of the right to health for all has been eroded in recent years. A large reason is WHO’s **failure to challenge the pharmaceutical** industry on access to medicines for people with HIV/AIDS and other diseases. WHO’s collaboration with the industry in the “Accelerated Access” programme on antiretroviral medicines sounds good. In fact, the programme has served as a cover for the organisation’s frequent acceptance of industry arguments for restricting treatment access. To re-establish WHO’s credibility, the new Director-General must lead the organisation to stand consistently with those most deprived of health services. Kenneth Roth, Executive Director, Human Rights Watch.

#### Right to Health solves Nationalist Populism.

Friedman 17 Eric Friedman March 2017 “New WHO Leader Will Need Human Rights to Counter Nationalistic Populism” <https://www.hhrjournal.org/2017/03/new-who-leader-will-need-human-rights-to-counter-populism/> (JD, Project Leader of the Platform for a Framework Convention on Global Health at the O’Neill Institute for National and Global Health Law at the Georgetown University Law Center in Washington, DC)//Elmer

The need for WHO leadership on human rights—and for global leadership on health and human rights beyond WHO—has always been present, yet has become ever more pressing. A reactionary, nationalist populism has been gaining momentum, particularly in the United States and parts of Europe, and some of its most disturbing features, such as xenophobia and disregard for international law and institutions, are surfacing elsewhere. Persisting health challenges—such as immense national and **global health inequities**, with universal health coverage and the Sustainable Development Goals offering some hope of lessening them—and growing threats such as outbreaks of infectious disease, worsening antimicrobial resistance, and climate change demand the type of leadership that the right to health entails. In this immensely challenging environment, WHO needs to become a 21st century institution that has the gravitas and credibility to carve a path through these obstacles towards global health justice. The next WHO Director-General, to be elected in May, must lead the organization there. The right to health can light the way ahead, with reforms to, and driven by, WHO. These reforms must develop an internal governance that is far more welcoming of civil society, with WHO member states significantly increasing contributions so work on the social determinants of health can expand, and with enhanced transparency and accountability. Furthermore, reforms are needed so that WHO leads on global health equity and human rights, including through national health equity strategies and, above all, the Framework Convention on Global Health (FCGH). The FCGH could help bring the right to health to the next level by capturing core aspects of the right to health, such as: 1) participation and accountability, setting clear standards for people’s participation in health policy-making at all levels, and establishing multi-layered health accountability frameworks with standards to which all nations would be held; 2) equity, including by catalyzing national health equity strategies—which must be developed through broad participation, itself a potentially empowering process—and advancing data disaggregation and more equitable financing; 3) financial resources, with global norms on national and international health financing responsibilities; and 4) respecting and promoting the right to health in all policies, from setting standards on health impact assessments—including participatory processes in developing them, human rights standards, an equity focus, and follow-up processes—to firmly ensuring the primacy of the right to health in other legal regimes that may undermine. From an earlier WHO treaty, the Framework Convention on Tobacco Control, we know the power of international law to significantly advance health, with the transformative power of legally binding global health norms. As a treaty, the FCGH would increase political accountability and accountability through the courts, while helping protect health other treaty-based international regimes, such as trade. It would also be a bold assertion of global solidarity for global justice, as so urgently needed, “demonstrating that the community of **nations are indeed stronger together**.” One candidate for the WHO Director-General election, David Nabarro, has recognized the value and civil society support that FCGH has already received, and the need to further explore the treaty (mentioned at 1:46:38 mark). A good first step would be establishing a WHO working group on the FCGH, with broad participation, particularly from states, civil society, and representatives of communities most affected by health inequities, along with relevant international agencies. We see signs of **resistance of the dangerous nationalist populism**, from protests that persist and judicial checks on one of the administration’s vilest acts (an immigration and refugee travel ban, with its effects falling heaviest on Muslims) in the United States to the rejection of the far-right candidate in the elections in the Netherland. Such resistance can prevent some of the worst impacts on the right to health, from discrimination against migrants to cuts to programs vital for health. Meanwhile, let’s construct an edifice for the future of health and human rights, even as we stand against its destruction. WHO, right to health, and FCGH leadership ought to be a core part of that endeavor.

#### Populism is an existential threat.

de Waal 16 Alex de Waal 12-5-2016 “Garrison America and the Threat of Global War” <http://bostonreview.net/war-security-politics-global-justice/alex-de-waal-garrison-america-and-threat-global-war> (Executive Director of the World Peace Foundation at the Fletcher School at Tufts University)//Elmer

Polanyi recounts how economic and financial crisis led to global calamity. Something similar could happen today. In fact we are already in a steady unpicking of the liberal peace that glowed at the turn of the millennium. Since approximately 2008, the historic decline in the number and lethality of wars appears to have been reversed. Today’s wars are not like World War I, with formal declarations of war, clear war zones, rules of engagement, and definite endings. But they are wars nonetheless. What does a world in global, generalized war look like? We have an unwinnable “war on terror” that is metastasizing with every escalation, and which has blurred the boundaries between war and everything else. We have deep states—built on a new oligarchy of generals, spies, and private-sector suppliers—that are strangling liberalism. We have emboldened middle powers (such as Saudi Arabia) and revanchist powers (such as Russia) rearming and taking unilateral military action across borders (Ukraine and Syria). We have massive profiteering from conflicts by the arms industry, as well as through the corruption and organized crime that follow in their wake (Afghanistan). We have impoverishment and starvation through economic warfare, the worst case being Yemen. We have “peacekeeping” forces fighting wars (Somalia). We have regional rivals threatening one another, some with nuclear weapons (India and Pakistan) and others with possibilities of acquiring them (Saudi Arabia and Iran). Above all, today’s generalized war is a conflict of destabilization, with big powers intervening in the domestic politics of others, buying influence in their security establishments, bribing their way to big commercial contracts and thereby corroding respect for government, and manipulating public opinion through the media. Washington, D.C., and Moscow each does this in its own way. Put the pieces together and a global political market of rival plutocracies comes into view. Add virulent reactionary populism to the mix and it resembles a war on democracy. What more might we see? Economic liberalism is a creed of optimism and abundance; reactionary protectionism feeds on pessimistic scarcity. If we see punitive trade wars and national leaders taking preemptive action to secure strategic resources within the walls of their garrison states, then old-fashioned territorial disputes along with accelerated state-commercial grabbing of land and minerals are in prospect. We could see mobilization against immigrants and minorities as a way of enflaming and rewarding a constituency that can police borders, enforce the new political rightness, and even become electoral vigilantes. Liberal multilateralism is a system of seeking common wins through peaceful negotiation; case-by-case power dealing is a zero-sum calculus. We may see regional arms races, nuclear proliferation, and opportunistic power coalitions to exploit the weak. In such a global political marketplace, we would see middle-ranking and junior states rewarded for the toughness of their bargaining, and foreign policy and security strategy delegated to the CEOs of oil companies, defense contractors, bankers, and real estate magnates. The United Nations system appeals to leaders to live up to the highest standards. The fact that they so often conceal their transgressions is the tribute that vice pays to virtue. A cabal of plutocratic populists would revel in the opposite: applauding one another’s readiness to tear up cosmopolitan liberalism and pursue a latter-day mercantilist naked self-interest. Garrison America could opportunistically collude with similarly constituted political-military business regimes in Russia, China, Turkey, and elsewhere for a new realpolitik global concert, redolent of the early nineteenth-century era of the Congress of Vienna, bringing a façade of stability for as long as they collude—and war when they fall out. And there is a danger that, in response to a terrorist outrage or an international political crisis, President Trump will do something stupid, just as Europe’s leaders so unthinkingly strolled into World War I. The multilateral security system is in poor health and may not be able to cope. Underpinning this is a simple truth: the plutocratic populist order is a future that does not work. If illustration were needed of the logic of hiding under the blanket rather than facing difficult realities, look no further than Trump’s readiness to deny climate change. We have been here before, more or less, and from history we can gather important lessons about what we must do now. The importance of defending civility with democratic deliberation, respecting human rights and values, and maintaining a commitment to public goods and the global commons—including the future of the planet—remain evergreen. We need to find our way to a new 1945—and the global political settlement for a tamed and humane capitalism—without having to suffer the catastrophic traumas of trying everything else first.

### 1NC – OFF

#### Genocidal settlement is a structure, not an event meaning ontological logic of elimination is an everyday manifestation that defines settler identity.

**Rifkin 14**, Mark. Settler common sense: Queerness and everyday colonialism in the American renaissance. U of Minnesota Press, 2014. (Associate Professor of English & WGS at UNC-Greensboro)//Elmer

If nineteenth-century American literary studies tends to focus on the ways Indians enter the narrative frame and the kinds of meanings and associa- tions they bear, recent **attempts to theorize settler colonialism** have sought to **shift attention from its effects** on Indigenous subjects **to** its **implications for nonnative political attachments**, forms of inhabitance, **and modes of being**, illuminating and tracking the pervasive operation of **settlement as a system**. In Settler Colonialism and the Transformation of Anthropology, Patrick Wolfe argues, “Settler colonies were (are) premised on the elimination of native societies. The split tensing reflects a determinate feature of settler colonization. The colonizers come to stay—invasion is **a structure not an event**” (2).6 He suggests that a “**logic** **of elimination” drives settler** governance and **sociality**, describing “the settler-colonial will” as “a historical force that ultimately derives from the primal drive to expansion that is generally glossed as capitalism” (167), and in “Settler Colonialism and the Elimination of the Native,” he observes that “elimination is an organizing principle of settler-colonial society rather than a one-off (and superceded) occurrence” (388). Rather than being superseded after an initial moment/ period of conquest, colonization persists since “the logic of elimination marks a return whereby the native repressed continues to structure settler- colonial society” (390). In Aileen Moreton-Robinson’s work, whiteness func- tions as the central way of understanding the domination and displacement of Indigenous peoples by nonnatives.7 In “Writing Off Indigenous Sover- eignty,” she argues, “As a regime of power, patriarchal white sovereignty operates ideologically, materially and discursively to reproduce and main- tain its investment in the nation as a white possession” (88), and in “Writ- ing Off Treaties,” she suggests, “**At an ontological level** the **structure of subjective possession** **occurs through** the **imposition of one’s will-to-be on the thing which is perceived to lack will,** thus it is open to being possessed,” such that “possession . . . forms part of **the ontological structure of white subjectivity**” (83–84). For Jodi Byrd, the deployment of Indianness as a mobile figure works as the principal mode of U.S. settler colonialism. She observes that “colonization and racialization . . . have often been conflated,” in ways that “tend to be sited along the axis of inclusion/exclusion” and that “misdirect and cloud attention from the underlying structures of settler colonialism” (xxiii, xvii). She argues that settlement works through the translation of indigeneity as Indianness, casting place-based political collec- tivities as (racialized) populations subject to U.S. jurisdiction and manage- ment: “the Indian is left nowhere and everywhere within the ontological premises through which U.S. empire orients, imagines, and critiques itself ”; “**ideas of** Indians and **Indianness** have **served as the ontological ground through which U.S. settler colonialism enacts itself** ” (xix).

#### That results in land exploitation and ecocide – specifically manifests in knowledge institutions making forefronting Settler Colonialism a prior question.

**Paperson 17** la paperson or K. Wayne Yang, June 2017, “A Third University is Possible” (an associate professor of ethnic studies at the University of California, San Diego)//Elmer

Land is the prime concern of settler colonialism, contexts in which the colonizer comes to a “new” place not only to seize and exploit but to stay, making that “new” place his permanent home. Settler colonialism thus complicates the center–periphery model that was classically used to describe colonialism, wherein an imperial center, the “metropole,” dominates distant colonies, the “periphery.” Typically, one thinks of European colonization of Africa, India, the Caribbean, the Pacific Islands, in terms of external colonialism, also called exploitation colonialism, where land and human beings are recast as natural resources for primitive accumulation: coltan, petroleum, diamonds, water, salt, seeds, genetic material, chattel. Theories named as “settler colonial studies” had a resurgence beginning around 2006.[2] However, the analysis of settler colonialism is actually not new, only often ignored within Western critiques of empire.[3] The critical literatures of the colonized have long positioned the violence of settlement as a prime feature in colonial life as well as in global arrangements of power. We can see this in Franz Fanon’s foundational critiques of colonialism. Whereas Fanon’s work is often generalized for its diagnoses of anti/colonial violence and the racialized psychoses of colonization upon colonized and colonizer, Fanon is also talking about settlement as the particular feature of French colonization in Algeria. For Fanon, the violence of French colonization in Algeria arises from settlement as a spatial immediacy of empire: the geospatial collapse of metropole and colony into the same time and place. On the “selfsame land” are spatialized white immunity and racialized violation, non-Native desires for freedom, Black life, and Indigenous relations.[4] Settler colonialism is too often thought of as “what happened” to Indigenous people. This kind of thinking confines the experiences of Indigenous people, their critiques of settler colonialism, their decolonial imaginations, to an unwarranted historicizing parochialism, as if settler colonialism were a past event that “happened to” Native peoples and not generalizable to non-Natives. Actually, settler colonialism is something that “happened for” settlers. Indeed, it is happening for them/us right now. Wa Thiong’o’s question of how instead of why directs us to think of land tenancy laws, debt, and the privatization of land as settler colonial technologies that enable the “eventful” history of plunder and disappearance. Property law is a settler colonial technology. The weapons that enforce it, the knowledge institutions that legitimize it, the financial institutions that operationalize it, are also technologies. Like all technologies, they evolve and spread. Recasting land as property means severing Indigenous peoples from land. This separation, what Hortense Spillers describes as “the loss of Indigenous name/land**”** for Africans-turned-chattel, recasts Black Indigenous people as black bodies for biopolitical disposal: who will be moved where, who will be murdered how, who will be machinery for what, and who will be made property for whom.[5] In the alienation of land from life, alienable rights are produced: the right to own (property), the right to law (protection through legitimated violence), the right to govern (supremacist sovereignty), the right to have rights (humanity). In a word, what is produced is whiteness. Moreover, it is not just human beings who are refigured in the schism. Land and nonhumans become alienable properties, a move that first alienates land from its own sovereign life. Thus we can speak of the various technologies required to create and maintain these separations, these alienations: Black from Indigenous, human from nonhuman, land from life.[6] “How?” is a question you ask if you are concerned with the mechanisms, not just the motives, of colonization. Instead of settler colonialism as an ideology, or as a history, you might consider settler colonialism as a set of technologies —a frame that could help you to forecast colonial next operations and to plot decolonial directions. This chapter proceeds with the following insights. (1) The settler–native– slave triad does not describe identities. The triad—an analytic mainstay of settler colonial studies—digs a pitfall of identity that not only chills collaborations but also implies that the racial will be the solution. (2) Technologies are trafficked. Technologies generate patterns of social relations to land. Technologies mutate, and so do these relationships. Colonial technologies travel. In tracing technologies’ past and future trajectories, we can connect how settler colonial and antiblack technologies circulate in transnational arenas. (3) Land—not just people—is the biopolitical target.[7] The examples are many: fracking, biopiracy, damming of rivers and flooding of valleys, the carcasses of pigs that die from the feed additive ractopamine and are allowable for harvest by the U.S. Food and Drug Administration. The subjugation of land and nonhuman life to deathlike states in order to support “human” life is a “biopolitics” well beyond the Foucauldian conception of biopolitical as governmentality or the neoliberal disciplining of modern, bourgeois, “human” subject. (4) (Y)our task is to theorize in the break, that is, to refuse the master narrative that technology is loyal to the master, that (y)our theory has a Eurocentric origin. Black studies, Indigenous studies, and Othered studies have already made their breaks with Foucault (over biopolitics), with Deleuze and Guatarri (over assemblages and machines), and with Marx (over life and primitive accumulation). (5) Even when they are dangerous, understanding technologies provides us some pathways for decolonizing work. We can identify projects of collaboration on decolonial technologies. Colonizing mechanisms are evolving into new forms, and they might be subverted toward decolonizing operations. The Settler–Native–Slave Triad Does Not Describe Identities One of the main interventions of settler colonial studies has been to insist that the patterning of social relations is shaped by colonialism’s thirst for land and thus is shaped to fit modes of empire. Because colonialism is a perverted affair, our relationships are also warped into complicitous arrangements of violation, trespass, and collusion with its mechanisms. For Fanon, the psychosis of colonialism arises from the patterning of violence into the binary relationship between the immune humanity of the white settler and the impugned humanity of the native. For Fanon, the supremacist “right” to create settler space that is immune from violence, and the “right” to abuse the body of the Native to maintain white immunity, this is the spatial and fleshy immediacy of settler colonialism. Furthermore, the “humanity” of the settler is constructed upon his agency over the land and nature. As Maldonado- Torres explains, “I think, therefore I am” is actually an articulation of “I conquer, therefore I am,” a sense of identity posited upon the harnessing of nature and its “natural” people.[8] This creates a host of post+colonial problems that have come to define modernity. Because the humanity of the settler is predicated on his ability to “write the world,” to make history upon and over the natural world, the colonized is instructed to make her claim to humanity by similarly acting on the world or, more precisely, acting in his. Indeed, for Fanon, it is the perverse ontology of settler becomings—becoming landowner or becoming property, becoming killable or becoming a killer—and the mutual implication of tortured and torturer that mark the psychosis of colonialism. This problem of modernity and colonial psychosis is echoed in Jack Forbes’s writings: Columbus was a wétiko. He was mentally ill or insane, the carrier of a terribly contagious psychological disease, the wétiko psychosis. . . . The wétiko psychosis, and the problems it creates, have inspired many resistance movements and efforts at reform or revolution. Unfortunately, most of these efforts have failed because they have never diagnosed the wétiko.[9] Under Western modernity, becoming “free” means becoming a colonizer, and because of this, “the central contradiction of modernity is freedom.”[10] Critiques of settler colonialism, therefore, do not offer just another “type” of colonialism to add to the literature but a mode of analysis that has repercussions for any diagnosis of coloniality and for understanding the modern conditions of freedom. By modern conditions of freedom, I mean that Western freedom is a product of colonial modernity, and I mean that such freedom comes with conditions, with strings attached, most manifest as terms of unfreedom for nonhumans. As Cindi Mayweather says, “your freedom’s in a bind.”[11]

#### Expansion of medical access is a form of settler colonial biomedical onslaught – humanitarian promotions of health proliferate genocidal assimilation.

**Klausen 13,** Jimmy Casas. "Reservations on hospitality: contact and vulnerability in Kant and indigenous action." Hospitality and World Politics. Palgrave Macmillan, London, 2013. 197-221. (Associate Professor in the Instituto de Relações Internacionais at the Pontifícia Universidade Católica do Rio de Janeiro)//Elmer

On the other hand and by contrast, the governmental reach of public health initiatives that would effect the improvement of isolated indigenous populations’ health accords with Kantian philanthropy – with all the risks of violated freedom and smothered life that entails. Public health advocates would repair the disadvantaged morbidity profile of isolated indigenous groups through a policy of initiating contact supported by the provision of modern biomedical health care services to ameliorate the epidemiological effects of contact. State-initiated contact without attendant health care has proved disastrous. Into the 1970s, FUNAI attempted to make friendly contact with isolated Indians. By relying on hired expert indigenous trackers, government contact expeditions located isolated groups and – demonstrating their interest in seeking commerce – enticed the latter with gifts of machetes and blankets. One FUNAI expedition to contact the Matis in 1978 resulted in high morbidity from pneumonia and other infectious diseases and killed one of every two Matis. 60 To correct such devastating policies, anthropologists Magdalena Hurtado, Kim Hill, Hillard Kaplan and Jane Lancaster have elaborated the following argument: Many anthropologists and indigenous-rights activists believe that uncontacted Indians should be left alone. These people are well-meaning, but they are wrong because they base their position on three incorrect assumptions. First, they assume that the Indians have chosen to remain isolated . . . . Those who oppose contact also assume that the Indians will inevitably be decimated by virgin-soil epidemics . . . . Finally, opponents of contact assume that isolated native groups will survive if not contacted. 61 However, even correcting for the fatal infelicities of past policy-driven, state-initiated contacts such as FUNAI’s, the preponderantly disadvantaged morbidity profile of such virgin-soil populations cannot be reduced by greater hospitality in the form of redoubled and more expert interventionary contacts. Although public health efforts like those advocated by Hurtado et al. might reduce mortality, highly disease-vulnerable persons will still sicken and will do so through means that would pretend to foster life by actively disregarding how the people subject to these external machinations might determine their own needs and value their own health. Isolated indigenes’ biological lives would be simultaneously fostered and risked, while their free personhood would count as nothing morally–culturally. In short, there are serious political costs to be weighed in such an intervention. Because of – and not in spite of – their philanthropy, public health interventions of the type that Hurtado et al. advocate extend the reach of governmentality much more intrusively than land rights policies. Besides deciding on behalf of peoples in regard to the interpretation of their acts of self-quarantine, the advocated public health policies surgically insert apparatuses of biomedicine directly into the contacted peoples’ living being. Such policies thereby displace indigenous norms of health and native cultural strategies of living on with the norms and overall strategy embedded in the culture of scientific and clinical biomedicine. Though the pretence is that such acts demonstrate the hospitality of the wider national or global society, such health policy interventions cannot simply make a presentation for possible society; rather, qua philanthropy they initiate contact, which, because of the high degree of vulnerability of those contacted, must needs lead to the proliferation of contacts. It is not a hospitable policy of fostering life that Hurtado et al. support, not merely possible commerce but an obsessive philanthropy of biomedical life support and literally unavoidable onslaught of commerce, possibly forevermore. Most startlingly, such public health interventions presume as universal a standard of life that could certainly vary while retaining meaning and value. The anthropologist Tess Lea describes this universalising interventionary compulsion in withering words: When you are a helping bureau-professional, the compulsion to do something to fix the problems of target populations – those deemed as suffering from unequal and preventable conditions – exceeds all other impulses . . . . ‘They’ need our greater commitment. The idea that life might be lived differently with value and meaning or that ‘need’ might be conceived differently from the way in which we calculate it through our interventionary lens, becomes impossible to imagine. 62 Hurtado et al. assume that health professionals and policy makers must hospitably confer biomedically acquired immunity on heretofore isolated and now contacted virgin soil populations. Fostering indigenous lives by imposing an alien conception of immunity, they would inhospitably destroy alternate strategies of living on. Seeing through their interventionary lens, Hurtado et al. themselves become arbiters of successful and unsuccessful forms of life: they presume that self-quarantine cannot itself serve as an effective cultural strategy to immunise living bodies. Thus, ironically perhaps, these anthropologists choose biology above culture by seeing each from a standpoint authorised by the culture of biomedicine. From their interventionary lens and against Canguilhem’s admonition above, self-quarantine appears to be a failed strategy for living on because the immunity it would confer is imperfect or incomplete. Likewise, condoning self-isolation is imperfect or incomplete hospitality as against their more perfect interventionary hospitality in the name of life. Authorising themselves to make these judgements, they enact an altogether different collapse of morality into nature than the Kantian collapse I reconstruct above. Whereas Kant’s collapse of minimalism into abstentionism and moral duty into nature’s constraints opens hospitality and therefore strategies for living on, this other collapse binds moralising conceptions of ‘health’ to the biomedically conceived body. Yet if, according to Canguilhem, for humans especially, ‘health is precisely a certain latitude, a certain play in the norms of life and behavior’, 63 then it seems that the ‘health’ that supposedly hospitable, though strictly philanthropic, ‘life’-fostering interventionary contact would impose on the exuberance of self-quarantining indigenous peoples is a sickness unto that other perpetual peace Kant mentions: death.

#### Biomedicine itself is invested in colonial exploitation through testing done on indigenous communities to biopiracy and stealing indigenous knowledge.

**Lift Mode 17** 3-10-2017 "Pharmaceutical Colonialism” <https://medium.com/@liftmode/pharmaceutical-colonialism-3-ways-that-western-medicine-takes-from-indigenous-communities-3a9339b4f24f> (We at Liftmode.com are a team of professionals from a variety of backgrounds, dedicated to the mission of providing the highest quality and highest purity nutritional health supplements on the market. We look specifically for the latest and most promising research in the fields of cognition enhancement, neuroscience and alternative health supplements, and develop commercial strategies to bring these technologies to the marketplace.)//Elmer

Does modern medicine take from rural communities? At first, this seems outrageous. However, on closer inspection, we find three main methods of poaching: stealing indigenous knowledge, ‘biopiracy’, and the sale of pharmaceuticals at exorbitant prices. Another example includes using developing countries and rural populations as test subjects in unethical clinical trials — for example on AIDS patients in South Africa.[1] This article examines three methods that Western medicine takes from rural communities. We also examine the emerging new forms of medicine and how many people are beginning to appreciate the medical knowledge of different cultures around the world. Traditional knowledge and culture is threatened by the expansive natural of the pharmaceutical industry 1. Pharmaceutical colonialism: Stealing Indigenous Knowledge First and foremost, what has been taken from indigenous communities for the last roughly 600 years is traditional knowledge about medicinal plants. It is interesting that the major advancements in Western medicine coincide very closely to escalating global colonialism by Western countries. It’s difficult to estimate the exact percentage of modern drugs that were originally based on traditional plant sources, because of the complex evolution of Western laboratory-made medicine. However, this percentage is known to be very high. In fact, a 2006 paper by Dr. A Gurib-Fakim states: “Natural products and their derivatives represent more than 50% of all the drugs in clinical use in the world. Higher plants contribute no less than 25% of the total.”[2] The extent to which traditional knowledge permeates through Western medicine is too broad to explain fully in a small article like this. We’d need to write an entire book to cover the full content! So, we will just take a look at one example below. How the West takes Indigenous knowledge: Anti-Malaria Drugs Mosquitoes are, by far, the world’s most dangerous animals, spreading a number of diseases including Dengue fever, Zika virus, and malaria. According to the World Health Organization, nearly half of the world’s population is at risk of malaria. In 2015, over 210 million people became infected with malaria, and a staggering 429 000 people died from the blood parasite.[3] To combat the infectious disease, scientists have developed two major classes of anti-malarial drugs. These are both based on indigenous knowledge of plant medicine: Mosquitos kill more people than any other animal every year 1. Quinine Quinine is extracted from the bark of the cinchona tree, native to South America. Contrary to propaganda by the Spanish inquisitors, which is still used in modern medicine today, Westerners did not ‘discover’ the cinchona tree. Indigenous Peruvian cultures had been using the bark of the cinchona tree for hundreds, possibly thousands, of years before the arrival of the colonial forces from the North. They crushed it up and mixed it with water to ‘relieve shivering’ — a major sign of the feverish symptoms of malaria.[4] Unlike traditional Chinese knowledge, which has survived until modern times, the ancient knowledge of South America cultures was almost completely destroyed by colonial forces. This makes tracing the historical use of the cinchona tree more difficult.[5] After the inquisition of most traditional cultures in South America, the cinchona bark was brought back to Western Europe and was hailed as one of the most exciting discoveries of modern medicine. The success of cinchona bark in Europe created a massive industry, initially run by the Spanish, but which was later overtaken by French and English industrialists.[6] It’s important to know that the ‘traditional’ use of cinchona bark in 18th century Europe was in exactly the same method as its original use in indigenous societies: crushing up the barking and mixing it with water. The chemical compound quinine was first extracted from cinchona bark in 1820 by two Frenchmen: Pierre Joseph Pelletier and Joseph Caventou. This allowed purified quinine to replace traditional cinchona extracts.[7] Interestingly, Western scientists have since discovered that cinchona bark actually contains several active components, which function in a synergistic relationship to kill the malaria parasite.[8] In modern times, a number of quinine-based drugs have been developed, with varying success. The issue becomes complex here because, while these drugs were developed by Western scientists using modern technological laboratories, if it hadn’t been for the original indigenous knowledge, these compounds could not have been developed at all. The quinine derivatives include Chloroquine, Pyrimethamine, and Mefloquine. Chloroquine was used as a spray along with DDT in the WHO’s malaria eradication plan (the efficacy and usefulness of this are still under debate: numerous countries that were sprayed with these chemicals soon developed strains of malaria that were resistant to the drugs).[9] 60411828 - workers are fogging for dengue control. mosquito borne diseases of zika virus. Quinine-based drugs were used in sprays to combat malaria around the world 2. Artemisinin Artemisinin is an active compound found in traditional Chinese medicine called Qinghao Su (sweet wormwood). This traditional Chinese medicine has been used to treat fevers for over a thousand years. It is currently still extracted from plant sources, the majority of which are grown in China, Vietnam and East Africa. Once the full-grown plants are harvested, the chemical is extracted, leaving the pure artemisinin at a highly variable market price of between $120 — $1200 per kilogram.[10] It’s interesting that the artemisinin-based drug combinations (ACTs) are the most expensive anti-malarial treatments available. This is despite the fact that it is one of the few malarial medications that are still mostly plant-based. However, Western pharmaceutical companies are now developing synthetic forms of artemisinin. The new forms of artemsinin are genetically engineered and have intellectual property rights attached, potentially bringing in big revenues for the companies involved. The proponents of the synthetic form of artemisinin claim that the synthetic form will be able to be sold for cheaper than the natural form. However, the average import price of natural artemsisin to India over the last ten years was around $370 per kilo — a fair amount cheaper than the price that the pharmaceutical companies are pushing for.[11] Artemisinin farming sustains the livelihoods of an estimated 100’000 farmers. With synthetic derivatives being developed this puts the livelihoods of the farmers and their families at risk of poverty (estimated to be around 3–5 times the number of people as the farmers themselves).[12] The ironic and disturbing thing about the whole situation is that the artemisinin farmers themselves are the ones who are most at risk of contracting malaria. In effect, they stand to not only have their incomes stripped by Western pharmaceutical companies but also to become physically dependent on the products of those very companies. [13] 16118463 - portrait of a burmese woman with thanaka powdered face working in farm Farmers livelihoods are threatened by the use of synthetic chemicals 2. ‘Biopiracy’ — stealing natural resources and plants The idea that modern medicine might be a form of colonialism seems at first to be quite outrageous! However, on closer inspection, it’s quite clear that a few nations continue to play the role of ‘missionary’, helping to save people in the ‘developing world’.[14] In some cases, though, the role of the ‘missionary’ becomes a little less clear. The second way that Western medicine takes from indigenous communities is something called ‘Biopiracy’. This is similar to the method we described above, however, in this case, what is taken is not knowledge but the actual plants and resources themselves. In biopiracy actions, plants and natural resources are stolen entirely from indigenous communities and are then used to develop drugs and medicines in the West. The indigenous communities benefit nothing from the theft of their resources. Medicines developed from stolen materials are often sold back to the very people from whom the original plant-sources were stolen — at exorbitant prices. Examples of medications that face biopiracy charges include: A drug for diabetes developed in the UK from a Libyan plant, Artemisia judaica A medicine for immunosuppression developed by GlaxoSmithKline which is derived from a chemical found in termite hills in Gambia An HIV treatment taken from bacteria found in central Uganda Antibiotic drugs developed from amoebas found in Mauritius and Venezuela Anti-diarrhea vaccines developed from Egyptian bacteria [15] According to Beth Burrows, president of Washington-based Edmond’s Institute: “Times have changed. It is no longer acceptable for the great white explorer to trawl across Africa or South America taking what they want for their own commercial benefit. It is no more than a new form of colonial pillaging. As there are internationally recognized rights for oil, so there should be for indigenous plants and knowledge.”[16] In an ideal world, knowledge and resources would be shared equitably. Both the indigenous cultures and the modern world would benefit from the sharing of knowledge and medicinal plants, which could leave the world a much better place. However, this is not the case in today’s world. More and more, we see evidence of pharmaceutical companies using rural communities as customers and guinea-pigs for medicine that was originally sourced from local knowledge.[17] Traditional medicine is pushed off the market and indigenous knowledge is ‘dumbed down’ through development programs. This forces the majority of the world to have to work through cartel-like pharmaceutical corporations who extract unbelievably large sums of money from people, which we’ll look at below.[18] 21736635 - shanty house in bangkok water canals along the river bank, thailand Those who benefit the least from pharmaceutical colonialism are the ones who need healthcare the most

#### Vote negative to endorse a cartography of refusal

**Day 15** Iyko, Associate Professor of English. Chair, Critical Social Thought. “Being or Nothingness: Indigeneity, Antiblackness, and Settler Colonial Critique.” Source: Critical Ethnic Studies, Vol. 1, No. 2 (Fall 2015), pp. 102-121 //Elmer

And so the potential relations that Wilderson sets up through a critique of sovereignty are at best irrelevant or at worse false in Sexton’s absolute claim that slavery stands alone as the “threshold of the political world.”45 I suggest that this wavering relation/nonrelation of antiblackness and Indigeneity exhibited in Wilderson’s and Sexton’s work reveal the problem in any totalizing approach to the heterogeneous constitution of racial difference in settler colonies. Beyond this inconsistency, the liberal multiculturalist agenda that Wilderson and Sexton project into Indigenous sovereignty willfully evacuates any Indigenous refusal of a colonial politics of recognition. Among other broad strokes, Sexton states, “as a rule, Native Studies reproduces the dominant liberal political narrative of emancipation and enfranchisement.”46 This provides a basis for Wilderson’s assertion that Indigenous sovereignty engages in a liberal politics of state legitimation through recognition because “treaties are forms of articulation” that buttress “the interlocutory life of America as a coherent (albeit genocidal) idea.”47 But such a depoliticized liberal project is frankly incompatible with Indigenous activism and scholarship that emerges from Native studies in North America. The main argument in Glen Sean Coulthard’s book Red Skin, White Masks is to categorically reject “the liberal recognition-based approach to Indigenous selfdetermination.”48 This is not a politics of legitimizing Indigenous nations through state recognition but rather one of refusal, a refusal to be recognized and thus interpellated by the settler colonial nation-state. Drawing on Fanon, Coulthard describes the “necessity on the part of the oppressed to ‘turn away’ from their other-oriented master-dependency, and to instead struggle for freedom on their own terms and in accordance with their own values.”49 It is also difficult to reconcile the depoliticized narrative of “resurgence and recovery” that Wilderson and Sexton attribute to Indigenous sovereignty in the face of Idle No More, the anticapitalist Indigenous sovereignty movement in Canada whose national railway and highway blockades have seriously destabilized the expropriation of natural resources for the global market. These are examples that Coulthard describes as “direct action” rather tjhan negotiation—in other words, antagonism, not conflict resolution: The [blockades] are a crucial act of negation insofar as they seek to impede or block the flow of resources currently being transported to international markets from oil and gas fields, refineries, lumber mills, mining operations, and hydroelectric facilities located on the dispossessed lands of Indigenous nations. These modes of direct action . . . seek to have a negative impact on the economic infrastructure that is core to the colonial accumulation of capital in settler-political economies like Canada’s.50 These tactics are part of what Audra Simpson calls a “cartography of refusal” that “negates the authority of the other’s gaze.”51 It is impossible to frame the blockade movement, which has become the greatest threat to Canada’s resource agenda,52 as a struggle for “enfranchisement.” Idle No More is not in “conflict” with the Canadian nation-state; it is in a struggle against the very premise of settler colonial capitalism that requires the elimination of Indigenous peoples. As Coulthard states unambiguously, “For Indigenous nations to live, capitalism must die.”

### 1NC – OFF

#### Counterplan text: during pandemics The member nations of the WTO should impose a mandatory lockdown until there is no more than one new case per day per 100,000 people after which local officials will modulate lockdown levels based on local case numbers. Governments should compensate both individual workers and small businesses that suffer substantial or irreparable economic loss as a result of lockdowns.

#### Only the lockdown solves- it curbs Disease spread until the vaccine

Osterholm, 20 -- Regents Professor and Director of the Center for Infectious Disease Research and Policy at the University of Minnesota

[Michael T. and Mark Olshaker, writer and documentary filmmaker, "America Needs to Lock Down Again," Foreign Affairs, 9-16-20, https://www.foreignaffairs.com/articles/united-states/2020-09-16/coronavirus-america-needs-lock-down-again, accessed 10-29-20]

In our essay “Chronicle of a Pandemic Foretold,” for the July/August issue of Foreign Affairs, we described the struggle against COVID-19 in terms of a baseball game and estimated that the United States was in about the third inning of a nine-inning contest. At this point, however, it may be more helpful to shift to an altogether different analogy. The unfolding story of the pandemic is a three-act play, in which the country is now midway through the second act.

The first act saw the disease spread from China to the rest of the world and to a woefully unprepared United States. The second witnessed Americans tire of restrictions and effectively surrender to the pandemic. Infection rates across the country soared during the summer and will likely rise again in the autumn as schools and universities reopen. To truly get the novel coronavirus under control, the United States must do what it has not done so far: impose real and stringent lockdowns across the country for roughly two months. Controlling the spread of the disease in this way will save lives ahead of the eventual end of this drama in the pandemic’s final act—the arrival of a safe, effective vaccine.

THE CURTAIN RISES

Act I opened in late 2019 with the emergence in China of a novel coronavirus that spread throughout much of the world with breathtaking speed and effect. Nations and regions faced the challenge in different ways and with varying levels of success. After a horrendous start, for example, Italy managed to get transmission substantially under control by imposing a near-complete shutdown of the northern part of the country. In the United States, both New York City and New York State saw catastrophic levels of infection that overwhelmed the entire health-care system. It is difficult to forget the images of refrigerated trailers sitting outside hospital emergency rooms to accommodate the dead. But under the leadership of Governor Andrew Cuomo—and thanks to a coordinated state public health response—New York locked down to get the number of cases to a manageable level and then maintain the low numbers, turning a disaster into a model for the rest of the United States.

The issue of testing loomed over Act I. Some Asian nations that had experience with SARS began widespread testing of possible cases early and therefore were able to do contact tracing and largely control viral transmission. The United States did not do that. The White House denied the potential seriousness of the coronavirus (allegedly in a bid to prevent “panic”), while the Centers for Disease Control and Prevention (CDC) developed a test for national use that was faulty, leaving the virus difficult to track and making case isolation and contact tracing ineffective as a means to control transmission. That forced the country onto a much more disruptive path: an attempt to control and mitigate the virus’s effects through a national lockdown of all nonessential personnel.

The price was steep, with millions of jobs lost, schools closed, and all public events and gatherings officially canceled. In mid-April, the United States was seeing 32,000 new cases a day. But a month later, that figure had dropped to 22,000 and Americans felt they had turned a corner, that the pandemic was subsiding and the battle was won.

THE DISTANT PEAK

Act II of this drama began around Memorial Day weekend in late May. Pandemic fatigue had set in. Americans seemed to collectively declare, “We’re done,” taking any decrease in daily case counts or deaths as a sign that the virus had been curtailed. The warm-weather months drew people into social settings, and the White House and a host of pundits encouraged this natural yearning to get back to business—and leisure—as usual. The administration and its allies posited a zero-sum choice between continuing to slow transmission of the disease and saving the economy. In fact, the country had the fire only under limited control, and if you stop fighting a fire at that point, it will naturally flare up again and continue to burn.

By July 20, with people resuming socializing in large groups, the country’s daily new case count shot up to more than 66,000. It should be noted that the many protests that followed the death of George Floyd in late May did not contribute much to the spread since the demonstrations occurred outdoors, where the virus rapidly dissipates in the air. The spring weekend beach gatherings of young people, by contrast, led to more serious transmissions because revelers often ended up indoors, particularly in close and crowded confines such as bars and houses.

The rate of daily new cases dipped to a little over 42,000 by the end of August, largely because of major containment efforts in California, Florida, Georgia, and Texas. As encouraging as that was on the face of it, the United States was still seeing about 1,000 COVID-19-related deaths per day, hardly a victory by any standard. Americans can expect these crests and troughs in new infections to continue, with each successive peak higher than the one before, until either an effective vaccine becomes widely available or herd immunity is established in the population through person-to-person transmission.

Herd immunity is often discussed but widely misunderstood. Each infectious disease has a different threshold for what percentage of a given population must be immune before the rate of transmission begins to drop. For a highly infectious agent transmitted through the air, such as measles, that percentage can be as high as 95 percent. For COVID-19, most public health infectious disease experts estimate it to be between 50 and 70 percent. One theory holds that the best way to approach the virus is to try to achieve herd immunity as quickly as possible through natural infection so everything can get back to normal, while protecting the older and most vulnerable people. This is the method seemingly employed by Sweden. Its transmission and mortality rates were significantly higher than those of neighboring Denmark and Norway, but the country does not appear to be substantially closer to reaching herd immunity than its Scandinavian neighbors, all of which are still far short of the threshold. Moreover, there is emerging evidence that exposure to the virus may confer only temporary immunity, possibly as brief as several months. And achieving herd immunity—if that is even possible—would only slow transmission, not halt it.

By the most liberal estimates, only about ten to 12 percent of the U.S. population has been infected thus far and, as Sweden’s experience has shown, reaching the threshold will be a long-drawn-out process that could result in the deaths of more than two million Americans. As it is, with about four percent of the world’s population, the United States has racked up about a quarter of all confirmed COVID-19 fatalities. The country failed to protect vulnerable populations, as witnessed in the many outbreaks in nursing homes and extended-care facilities. The virus has also taken a toll on young and healthy individuals; even some with mild or asymptomatic variants of the disease have become “long haulers,” who experience a range of symptoms, including chronic fatigue and cardiac and respiratory issues, weeks or months after getting infected.

SHUT IT DOWN

Herd immunity is a distant and unrealistic prospect, but Americans still have the opportunity to mitigate the suffering and death caused by the disease. The reality is that the only way for the United States to get through Act II with low levels of morbidity and mortality is through more complete lockdowns than were previously implemented in areas with high incidence of infection. Currently, the upper Midwest is the “hottest” area in the country for community-wide transmission, but other areas will see increasing case totals deeper into the fall. The aim at this point, quite simply, should be to cut transmission of the virus as much as possible until the creation and distribution of an effective vaccine.

Such lockdowns should last six to eight weeks with a goal of reaching no more than one new case per day per 100,000 people. This low rate is necessary for testing and contact tracing to have any meaningful effect. Once that rate is achieved, however, local officials will be able to adjust lockdown measures more accurately and with the flexibility the pandemic demands. If the White House and federal government will not lead, which is unfortunately likely under the current administration, the governors of each state, in coordination with their neighboring states, must take the initiative themselves. Some might think this is unrealistic, but New York has been able to maintain this low rate of new infections for the past three months.

Stringent lockdowns, of course, would depend on the continued labor of essential workers, a category we estimate to be no more than 35 percent of the workforce and possibly less. What about other workers? As part of its broader anti-COVID-19 strategy, the federal and state governments should compensate both individual workers and small businesses that suffer substantial or irreparable economic loss as a result of lockdowns. Such support negates the false choice between public and economic health. If carried out successfully, the near-complete shutdowns would be not open-ended but limited in time. And the government has the means to prop up adversely affected workers and businesses. As Minneapolis Federal Reserve Bank President Neel Kashkari outlined in an op-ed in The New York Times cowritten with one of us (Osterholm), this fiscal obligation could be covered by the money most Americans who have not lost income are saving by not spending as much during the pandemic—the personal savings rate of Americans has grown from eight percent in January to 20 percent in August. Domestic savings can fund investment in the national economy, a concept that should work equally well in other developed nations. Banks, whose holdings have been boosted by the additional savings, could loan the money necessary for protecting jobs and businesses; Americans would essentially be repaying themselves rather than taking the more traditional route of incurring foreign debt. We believe many people would support a more robust lockdown if they understood that they would not suffer financially. Such a subsidy will actually save money in the long term by preserving jobs and small businesses.

The alternatives to serious lockdowns are insufficient. In areas where the disease is still rampant, masks and physical distancing alone will not get the job done. Business as usual for another six to eight months—until an effective vaccine is widely available—will send current rates of transmission even higher, especially as schools and colleges reopen. By the middle of September, some universities had already canceled in-person classes owing to widespread transmission on campus. Consider how much pain, suffering, and death Americans have endured so far, with no more than ten to 12 percent of the population infected. The next phase could be overwhelming and make Americans look back with nostalgia at the time when new infection rates were still under 100,000 per day.

A DIFFICULT DENOUEMENT

The final act will begin when—and if—one vaccine or more becomes broadly available. A vaccine will eventually bring this long drama to an end, but it will raise a whole new set of questions. Will enough Americans be willing to take it, given our national schizophrenic view of vaccines and science in general? How effective will a vaccine be, and how long will it confer immunity? What will the rules be for approving the vaccine, in the United States and the rest of the world? Who should, or will, get it first? There has been little official or public discussion about answers to these important questions.

It would be dangerous if a possible vaccine became politicized, either to achieve power, prestige, and influence for the country that produces it or to gain partisan advantage within the United States. Many in the public health sphere are afraid that a vaccine will be made available for use before it has been demonstrated to be safe and effective. Never before has the authority and confidence in U.S. government scientific institutions been so undermined by real or perceived political pressure from the White House. At the beginning of September, the CDC directed localities to prepare for the distribution of a vaccine in two months, at the beginning of November, right around the time of the presidential election. One possible mechanism for this expedited rollout would require the president to direct the Food and Drug Administration or the secretary of the Department of Health and Human Services to grant Emergency Use Authorization for a vaccine candidate that looks promising but has not been through the entire validating process.

There is indeed an inescapable tension between wanting a vaccine as soon as possible to prevent further transmission of the disease (and the resulting illnesses and deaths) and taking the necessary time to produce a safe vaccine, whose efficacy and effects on people of various ages and health situations are well understood. But public health and political officials should be extremely wary of any attempt to grant Emergency Use Authorization to a vaccine that hasn’t completed phase three trials, the final and most rigorous stage in which the product is tested over a broad range of thousands of subjects. In most instances in which such authorization is granted, it is for extremely sick or even dying patients. In this case, it would be granted to administer a vaccine to healthy people before the formula is perfected and before any potential negative effects have been documented. In 1955, one company’s production of the original Salk polio vaccine turned out to be defective, causing 40,000 cases of polio. Ten children died. In 1976, a rush to produce a vaccine against a perceived threat of swine flu left approximately 450 recipients with Guillain-Barré Syndrome paralysis.

One of the key reasons for a full phase three review, which includes at least 30,000 test subjects in a double-blind administration (meaning neither the subject nor the administrator knows who has been given the vaccine and who has been given a placebo), is to determine the vaccine’s impact and effects, positive and negative, on a range of different risk groups. What might be safe and effective for young adults, for example, might be ineffective or even harmful for seniors or those with certain underlying conditions. It is also possible that the effect on children could be different or unpredictable. These results will probably take months to sort out. Even more troubling, present plans do not call for either children or the elderly to be included in the phase three test group. Moreover, the first vaccines for this virus probably won’t be home runs (to go back to baseball analogies for a moment) like the smallpox, polio, and measles vaccines. They are more likely to be singles and doubles like the annual influenza vaccine, which in a good year is about 50 percent effective. Americans won’t be going back to the “old normal” anytime soon.

The best outcome in Act III will be the development and distribution of the vaccine as quickly and widely as possible, without shortcuts on safety or testing for effectiveness. The U.S. government should establish and publicize the criteria by which a vaccine will be considered ready for wide-scale public use as well as make clear which groups of people will receive the vaccine first. A proven safe and effective vaccine should first be given to physicians, hospital personnel, and first responders; then to essential workers with underlying risks for serious disease; and after that, to children so that they can stay in school.

But right now, the United States should just be trying to get through the rest of Act II—the coronavirus winter—and hold out until the arrival of a vaccine-enabled spring. It must impose severe lockdowns to truly curb the spread of the disease. New York has shown it can be done. It remains to be seen whether the rest of the country possesses the collective grit and determination to follow suit. A happy ending to this drama will very much be determined by how Americans decide to craft the rest of this current act.

#### Reasonability on 1AR shells – 1AR theory is very aff-biased because the 2AR gets to line-by-line every 2NR standard with new answers that never get responded to– reasonability checks 2AR sandbagging by preventing really abusive 1NCs while still giving the 2N a chance.

#### DTA on 1AR shells - They can blow up a blippy 20 second shell to 3 min of the 2AR while I have to split my time and can’t preempt 2AR spin which necessitates judge intervention and means 1AR theory is irresolvable so you shouldn’t stake the round on it.

## Case

### 1NC – AT: Advantage 1

#### Top Level –

#### They don't solve their aff -- all they do is ensure companies only get one protection per invention -- either orphan drug rights, a patent, or data exclusivity -- but theres no brightline for whats a new or old invention, so they cant stop evergreening. Companies will just slightly modify their invention and get a separate new patent and the aff has no litmus test for when an invention is significantlly new/different enough from past inventions

#### Companies will just obtain a patent in a different sector.

Thomas 15 [John R; Visiting Scholar, CRS; “Tailoring the Patent System for Specific Industries, Congressional Research Service,” CRS; 2015; <https://crsreports.congress.gov/product/pdf/R/R43264/7>] Justin

In view of the concerns noted above, commentators have gone so far to say that “it has become increasingly difficult to believe that a one-size-fits-all approach to patent law can survive.”75 To the extent the current patent system creates a blanket set of rules that apply comparably to distinct industries, it likely over-encourages innovation in some contexts and under-incentivizes it in others.76 Further, some observers have asserted that the need of firms to identify and access the patented inventions of others may differ among industries.77 As a result, the case can be made that distinct industrial, technological, and market characteristics that exist across the breadth of the U.S. economy compel industry-specific patent statutes. However, others have questioned the wisdom and practicality of such line-drawing.78 The following concerns, among others, have been identified:

• Over its long history, the U.S. patent system has flexibly adapted to new technologies such as biotechnology and computer software. Legislative adoption of technology-specific categories may leave unanticipated, cutting-edge technologies outside the patent system.79

• Defining a specific industry or category of technologies may prove to be a contested proposition.

80 • Over time, new industries may emerge and old industries may consolidate. The dynamic nature of the U.S. economy suggests greater need for legislative oversight within a differentiated patent regime.

81 • Even if an industry or technology remains relatively stable, the innovation environment within it might change. For example, technological or scientific advances might open new possibilities for research and development within hidebound industries—but also increase expense and risk for those firms.

82 • Distinct patent rights among industries or technologies may lead to strategic behavior on behalf of patent applicants. For example, a computer program that controls a fuel injector within an automobile could possibly be identified as either an automobile-related or a computer-related invention.

83 •The legislative effort to enact sector-specific patent laws may provide an opportunity for politically savvy firms to exert more lobbying and political power, at the possible expense of less sophisticated firms.

#### Pharma backlashes to the Plan – they’re aggressive lobbyists and will do anything to preserve patent rights.

Huetteman 19 Emmarie Huetteman 2-26-2019 “Senators Who Led Pharma-Friendly Patent Reform Also Prime Targets For Pharma Cash” <https://khn.org/news/senators-who-led-pharma-friendly-patent-reform-also-prime-targets-for-pharma-cash/> (former NYT Congressional correspondent with an MA in public affairs reporting from Northwestern University’s Medill School)//Elmer

Early last year, as lawmakers vowed to curb rising drug prices, Sen. Thom Tillis was named chairman of the Senate Judiciary Committee’s subcommittee on intellectual property rights, a committee that had not met since 2007. As the new gatekeeper for laws and oversight of the nation’s patent system, the North Carolina Republican signaled he was determined to make it easier for American businesses to benefit from it — a welcome message to the drugmakers who already leverage patents to block competitors and keep prices high. Less than three weeks after introducing a bill that would make it harder for generic drugmakers to compete with patent-holding drugmakers, Tillis opened the subcommittee’s first meeting on Feb. 26, 2019, with his own vow. “From the United States Patent and Trademark Office to the State Department’s Office of Intellectual Property Enforcement, no department or bureau is too big or too small for this subcommittee to take interest,” he said. “And we will.” In the months that followed, tens of thousands of dollars flowed from pharmaceutical companies toward his campaign, as well as to the campaigns of other subcommittee members — including some who promised to stop drugmakers from playing money-making games with the patent system, like Sen. John Cornyn (R-Texas). Tillis received more than $156,000 from political action committees tied to drug manufacturers in 2019, more than any other member of Congress, a new analysis of KHN’s Pharma Cash to Congress database shows. Sen. Chris Coons (D-Del.), the top Democrat on the subcommittee who worked side by side with Tillis, received more than $124,000 in drugmaker contributions last year, making him the No. 3 recipient in Congress. No. 2 was Sen. Mitch McConnell (R-Ky.), who took in about $139,000. As the Senate majority leader, he controls what legislation gets voted on by the Senate. Neither Tillis nor Coons sits on the Senate committees that introduced legislation last year to lower drug prices through methods like capping price increases to the rate of inflation. Of the four senators who drafted those bills, none received more than $76,000 from drug manufacturers in 2019. Tillis and Coons spent much of last year working on significant legislation that would expand the range of items eligible to be patented — a change that some experts say would make it easier for companies developing medical tests and treatments to own things that aren’t traditionally inventions, like genetic code. They have not yet officially introduced a bill. As obscure as patents might seem in an era of public **outrage** **over** drug prices, the fact that **drugmakers** gave most **to** the **lawmakers working to change the patent system** belies how important securing **the exclusive right to market a drug, and keep competitors at bay, is to their bottom line**. “**Pharma will fight to the death to preserve patent rights**,” said Robin Feldman, a professor at the UC Hastings College of the Law in San Francisco who is an expert in intellectual property rights and drug pricing. “Strong patent rights are central to the games drug companies play to extend their monopolies and keep prices high.” Campaign contributions, closely tracked by the Federal Election Commission, are among the few windows into how much money flows from the political groups of drugmakers and other companies to the lawmakers and their campaigns. Private companies generally give money to members of Congress to encourage them to listen to the companies, typically through lobbyists, whose activities are difficult to track. They may also communicate through so-called dark money groups, which are not required to report who gives them money. Over the past 10 years, the **pharmaceutical industry** has **spent** about $**233 million per year on lobbying**, according to a new study published in JAMA Internal Medicine. That is more than any other industry, including the oil and gas industry. Why Patents Matter Developing and testing a new drug, and gaining approval from the Food and Drug Administration, can take years and cost hundreds of millions of dollars. Drugmakers are generally granted a six- or seven-year exclusivity period to recoup their investments. But drugmakers have found ways to extend that period of exclusivity, sometimes accumulating hundreds of patents on the same drug and blocking competition for decades. One method is to patent many inventions beyond a drug’s active ingredient, such as patenting the injection device that administers the drug. Keeping that arrangement intact, or expanding what can be patented, is where lawmakers come in. Lawmakers Dig In Tillis’ home state of North Carolina is also home to three major research universities and, not coincidentally, multiple drugmakers’ headquarters, factories and other facilities. From his swearing-in in 2015 to the end of 2018, Tillis received about $160,000 from drugmakers based there or beyond. He almost matched that four-year total in 2019 alone, in the midst of a difficult reelection campaign to be decided this fall. He has raised nearly $10 million for his campaign, with lobbyists among his biggest contributors, according to OpenSecrets. Daniel Keylin, a spokesperson for Tillis, said Tillis and Coons, the subcommittee’s top Democrat, are working to overhaul the country’s “antiquated intellectual property laws.” Keylin said the bipartisan effort protects the development and access to affordable, lifesaving medication for patients,” adding: “No contribution has any impact on how [Tillis] votes or legislates.” Tillis signaled his openness to the drug industry early on. The day before being named chairman, he reintroduced a bill that would limit the options generic drugmakers have to challenge allegedly invalid patents, effectively helping brand-name drugmakers protect their monopolies. Former Sen. Orrin Hatch (R-Utah), whose warm relationship with the drug industry was well-known, had introduced the legislation, the Hatch-Waxman Integrity Act, just days before his retirement in 2018. At his subcommittee’s first hearing, Tillis said the members would rely on testimony from private businesses to guide them. He promised to hold hearings on patent eligibility standards and “reforms to the Patent Trial and Appeal Board.” In practice, the Hatch-Waxman Integrity Act would require generics makers challenging another drugmaker’s patent to either take their claim to the Patent Trial and Appeal Board, which acts as a sort of cheaper, faster quality check to catch bad patents, or file a lawsuit. A study released last year found that, since Congress created the Patent Trial and Appeal Board in 2011, it has narrowed or overturned about 51% of the drugmaker patents that generics makers have challenged. Feldman said the drug industry “went berserk” over the number of patents the board changed and has been eager to limit use of the board as much as possible. Patent reviewers are often stretched thin and sometimes make mistakes, said Aaron Kesselheim, a Harvard Medical School professor who is an expert in intellectual property rights and drug development. Limiting the ways to challenge patents, as Tillis’ bill would, does not strengthen the patent system, he said. “You want overlapping oversight for a system that is as important and fundamental as this system is,” he said. As promised, Tillis and Coons also spent much of the year working on so-called Section 101 reform regarding what is eligible to be patented — “a very major change” that “would overturn more than a century of Supreme Court law,” Feldman said. Sean Coit, Coons’ spokesperson, said lowering drug prices is one of the senator’s top priorities and pointed to Coon’s support for legislation the pharmaceutical industry opposes. “One of the reasons Senator Coons is leading efforts in Congress to fix our broken patent system is so that life-saving medicines can actually be developed and produced at affordable prices for every American,” Coit wrote in an email, adding that “his work on Section 101 reform has brought together advocates from across the spectrum, including academics and health experts.” In August, when much of Capitol Hill had emptied for summer recess, Tillis and Coons held closed-door meetings to preview their legislation to stakeholders, including the Pharmaceutical Research and Manufacturers of America, or PhRMA, the brand-name drug industry’s lobbying group. “We regularly engage with members of Congress in both parties to advance practical policy solutions that will lower medicine costs for patients,” said Holly Campbell, a PhRMA spokesperson. Neither proposal has received a public hearing. In the 30 days before Tillis and Coons were named leaders of the revived subcommittee, drug manufacturers gave them $21,000 from their political action committees. In the 30 days following that first hearing, Tillis and Coons received $60,000. Among their donors were PhRMA; the Biotechnology Innovation Organization, the biotech lobbying group; and five of the seven drugmakers whose executives — as Tillis laid out a pharma-friendly agenda for his new subcommittee — were getting chewed out by senators in a different hearing room over patent abuse. Cornyn Goes After Patent Abuse Richard Gonzalez, chief executive of AbbVie Inc., the company known for its top-selling drug, Humira, had spent the morning sitting stone-faced before the Senate Finance Committee as, one after another, senators excoriated him and six other executives of brand-name drug manufacturers over how they price their products. Cornyn brought up AbbVie’s more than 130 patents on Humira. Hadn’t the company blocked its competition? Cornyn asked Gonzalez, who carefully explained how AbbVie’s lawsuit against a generics competitor and subsequent licensing deal was not what he would describe as anti-competitive behavior. “I realize it may not be popular,” Gonzalez said. “But I think it is a reasonable balance.” A minute later, Cornyn turned to Sen. Chuck Grassley (R-Iowa), who, like Cornyn, was also a member of the revived intellectual property subcommittee. This is worth looking into with “our Judiciary Committee authorities as well,” Cornyn said, effectively threatening legislation on patent abuse. The next day, Mylan, one of the largest producers of generic drugs, gave Cornyn $5,000, FEC records show. The company had not donated to Cornyn in years. By midsummer, every drug company that sent an executive to that hearing had given money to Cornyn, including AbbVie. Cornyn, who faces perhaps the most difficult reelection fight of his career this fall, ranks No. 6 among members of Congress in drugmaker PAC contributions last year, KHN’s analysis shows. He received about $104,000. Cornyn has received about $708,500 from drugmakers since 2007, KHN’s database shows. According to OpenSecrets, he has raised more than $17 million for this year’s reelection campaign. Cornyn’s office declined to comment. On May 9, Cornyn and Sen. Richard Blumenthal (D-Conn.) introduced the **Affordable Prescriptions for Patients Act,** which proposed to define two tactics used by drug companies to make it easier for the Federal Trade Commission to **prosecute** them: “**product-hopping**,” when drugmakers withdraw older versions of their drugs from the market to push patients toward newer, more expensive ones, and “**patent-thicketing**,” when drugmakers amass a series of patents to drag out their exclusivity and slow rival generics makers, who must challenge those patents to enter the market once the initial exclusivity ends. **PhRMA opposed the bill.** **The next day, it gave Cornyn $1,000**. Cornyn and Blumenthal’s bill would have been “very tough on the techniques that pharmaceutical companies use to extend patent protections and to keep prices high,” Feldman said. “The **pharmaceutical industry lobbied tooth and nail against it**,” she said. “And **when the bill finally came** out of committee, the strongest provisions — the **patent-thicketing provisions — had been stripped**.” In the months after the bill cleared committee and waited to be taken up by the Senate, Cornyn blamed Senate Democrats for blocking the bill while trying to secure votes on legislation with more direct controls on drug prices. The Senate has not voted on the bill.

#### Alt cause—billions of livestock use more antibiotics than humans

#### No evidence post-plan innovations are aimed at AMR or quick enough to solve

#### Pharma innovation isn’t enough alt causes to vaccine production outweigh

**Bolle and Obstfeld 21** [Monica de Bolle and Maurice Obstfeld, VIEW SHARING OPTIONS Monica de Bolle, senior fellow at the Peterson Institute for International Economics since January 2017, is adjunct lecturer and former director for Latin American studies and emerging markets at the School of Advanced International Studies at Johns Hopkins University. De Bolle was nonresident senior fellow at the Institute between March 2015 and January 2017. Maurice Obstfeld has been nonresident senior fellow at the Peterson Institute for International Economics since February 2019. He is the Class of 1958 Professor of Economics and former chair of the department of economics (1998–2001) at the University of California, Berkeley. He previously taught at Harvard University (1989–90), the University of Pennsylvania (1986–89), and Columbia University (1979–86). Obstfeld served at the International Monetary Fund (IMF) as economic counsellor and director of the research department (2015–18) and as a member of the US President's Council of Economic Advisors (2014–15). Obstfeld was an honorary adviser to the Bank of Japan's Institute of Monetary and Economic Studies (2002–14) and has consulted and taught at the IMF, the World Bank, and numerous central banks around the world. 5-12-2021, accessed on 9-12-2021, PIIE, "Waiving patent and intellectual property protections is not a panacea for global vaccine distribution", <https://www.piie.com/blogs/realtime-economic-issues-watch/waiving-patent-and-intellectual-property-protections-not>] Adam

Navigating the procedural obstacles to get WTO agreement on a streamlined mechanism for suspending IP protections is not as easy as it would seem. It is already possible to waive protections in the 1994 WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). But the WTO's track record suggests that roadblocks may lie ahead in expanding the scope of its waiver procedure.

Since August 2003, the WTO has explicitly allowed emergency departures from the TRIPS agreement, enabling countries with manufacturing capacity to suspend IP protections to produce life-saving drugs and vaccines, not just for domestic use but also for export to countries that lack manufacturing capacity of their own. However, the process of negotiating the August 2003 decision—which created a temporary procedure for export waivers—took 14 months, and it was not until January 2017 that two-thirds of WTO members had[ratified](https://www.ip-watch.org/2017/01/23/official-trips-health-amendment-effect-first-ever-wto-agreement/) it as a formal amendment to the TRIPS agreement.

Because of this painful negotiation process, the bureaucratic procedures for exercising IP flexibility are so cumbersome that there are very few instances of its use. The best known (though not very successful) example occurred with Canadian exports of an AIDS treatment to [Rwanda](https://www.asil.org/insights/volume/11/issue/28/canadian-made-drugs-rwanda-first-application-wto-waiver-patents-and#_edn1) in 2007. Complicating matters further has been the opposition of some major countries to revisiting the issue, as well as the likely need for WTO members to revise their domestic legal frameworks to accommodate patent waivers. These factors make it clear that renewed negotiations within the WTO are unlikely to yield results with the speed that the current health emergency demands or result in a meaningfully better framework. Recognizing the likely difficulty of negotiations, WTO Director-General Ngozi Okonjo-Iweala has suggested a December 3, 2021 [deadline](https://www.washingtonpost.com/us-policy/2021/05/06/biden-patent-waiver-developing-world-long-road/) for completion—but like past initial deadlines in this space, this one could well prove overoptimistic.

The second, and arguably more intractable, challenge is technical: Even if they overcome IP obstacles and get permission to produce vaccines, less prosperous countries lack the know-how, facilities, and trained personnel to produce them. Despite the abysmal decades-long record of vaccine distribution in those countries, existing TRIPS flexibilities have done nothing to improve the situation. A smoother IP waiver process might help, but only as a component of a [broader effort.](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6291766/)

True, patent protection is the main obstacle to creation of generic small-molecule drugs, which chemists can synthesize. But other major obstacles exist for vaccines, which are biologics. For the latter category of drugs, an identical product requires an identical production technology, with most steps categorized as hard-to-replicate trade secrets rather than patentable innovations. Thus, Moderna [announced](https://investors.modernatx.com/news-releases/news-release-details/statement-moderna-intellectual-property-matters-during-covid-19) in October 2020 that it would not enforce its COVID-19-related patents during the pandemic. But this step, however laudable, is of limited immediate help to would-be producers of a "generic" version of the Moderna vaccine. Without precisely replicating all steps of Moderna's production process, including the many quality controls, a generic version would have untested immunogenicity (the ability to induce the body to generate an immune response) and thus would require extensive clinical trials before release. Production glitches—such as those that afflicted the Janssen/Johnson & Johnson vaccine in the United States—could prompt widespread vaccine skepticism, damaging pandemic control efforts.

The replication hurdle is especially high for the new and more sophisticated messenger ribonucleic acid (mRNA) vaccines, which have proven most effective against SARS-CoV-2 (the virus that causes COVID-19) and which are likely to provide the most adaptable platforms for the vaccines of the future. The genetic vaccines produced by Pfizer-BioNTech and Moderna require considerable technical knowledge and [sophisticated techniques](https://www.nytimes.com/interactive/2021/health/pfizer-coronavirus-vaccine.html) to generate a version of the viral spike protein that elicits a strong immune response.[1](https://www.piie.com/blogs/realtime-economic-issues-watch/waiving-patent-and-intellectual-property-protections-not" \l "_ftn1" \o ") Therefore, from a biological standpoint, patent and IP waivers alone cannot resolve the existing lack of capacity in most countries to produce genetic vaccines at scale locally.

A final challenge is that vaccine supply chains are intricate and global in scope. Different stages of vaccine manufacturing are spread across different parts of the globe, with various countries supplying key inputs and equipment. Patent and IP waivers cannot resolve export restrictions that these countries may decide to impose—and in fact have imposed—throughout the pandemic. Nor can poor countries with production waivers easily integrate into global supply chains. At the moment, current production capacity and quality standards continue to constrain global supply.

#### Only vaccines can solve superbugs, NOT changing treatments- AC Sobti

Sobti 19 [Dr. Navjot Kaur Sobti is an internal medicine resident physician at Dartmouth-Hitchcock-Medical Center/Dartmouth School of Medicine and a member of the ABC News Medical Unit. May 1, 2019. “Amid superbug crisis, scientists urge innovation”. <https://abcnews.go.com/Health/amidst-superbug-crisis-scientists-urge-innovation/story?id=62763415>] DR 21

Redfield emphasized the importance of vaccination during the global superbug crisis, stating that “the only way we have to eliminate an infection is vaccination.” He added that investing in innovation is key to solving the crisis. While WHO continues to advocate for superbug awareness, they warn that AMR has reversed “a century of progress in health.” The WHO added that “the challenges of antimicrobial resistance” are “not insurmountable,” and that coordinated action will “help to save millions of lives, preserve antimicrobials for generations to come and secure the future from drug-resistant diseases.”

#### New vaccine tech will be rapid and solve AMR

* Lol says new vaccines in the next decade solve cancer too- hidden defense to the other advantage

**Rappuoli 2021** (Rino Rappuoli, Ennio De Gregorio, Giuseppe Del Giudice, Sanjay Phogat, Simone Pecetta, Mariagrazia Pizza, and Emmanuel Hanon. All authors work at the Research and Development Centre, GlaxoSmithKline in Italy. "Vaccinology in the post− COVID-19 era." *Proceedings of the National Academy of Sciences* 118, no. 3 2021 Graph omitted.)DR 21

Reverse vaccinology, structure-based design, synthetic biology, and adjuvants are the tools that we have today to design vaccines that can be delivered as purified antigens, or by RNA and viral vectors. The COVID-19 pandemic has accelerated the maturation of RNA and viral vectors by at least a decade and made these new platforms available not only for emerging infections but also for the other health priorities such as antimicrobial resistance (AMR), chronic infections, and cancer that our world will need to face with urgency as soon as the COVID-19 emergency is over. To analyze the new challenges for vaccines, in [Fig. 3](https://www.pnas.org/content/118/3/e2020368118#F3), we divided vaccines into four groups. On the opposite sides, there are vaccines that we already have or that can be made with existing technologies (group A; [Fig. 3A](https://www.pnas.org/content/118/3/e2020368118#F3)) and vaccines that we cannot yet approach with today’s knowledge (group D; [Fig. 3D](https://www.pnas.org/content/118/3/e2020368118#F3)). Vaccines in groups B and C ([Fig. 3 B and C](https://www.pnas.org/content/118/3/e2020368118#F3)) are intermediate. A closer look at these groups shows that we can divide vaccination into two big categories, depending on whether we vaccinate a naïve immune system or vaccinate an immune system that has already encountered the antigen (primed immune system).

Vaccines for a Naïve Immune System.

The vaccine against smallpox developed more than two centuries ago and the vaccines in development today against COVID-19 are based on a similar principle. They both introduce, into the body, antigens that had never been seen before by the immune system, aiming at stimulating a long-term protection for a future encounter with the virus. The large majority of the vaccines in use today are also based on antigens that had never been seen before by the naïve immune system (diphtheria toxin, tetanus toxin, measles, mumps, rubella, poliomyelitis, hepatitis B, papillomavirus, and infant vaccination against influenza, pneumococcus, and meningococcus) ([Fig. 3A](https://www.pnas.org/content/118/3/e2020368118#F3)). When these vaccines are used, the antigens are taken up by professional antigen-presenting cells and presented to naïve B and T cells which mount an adaptive immune response. An important step in this process is the formation of germinal centers where follicular T helper cells and B cells cooperate to increase the potency of the B cells specific for the new antigen, via affinity maturation of antigen-reactive antibodies. This is the textbook vaccination for which we have both mechanistic and animal models, and is the vaccinology that we study when we inject animals (mostly mice) with a variety of antigens that are new for their immune system. In most cases, we have sufficient technologies and knowledge to develop vaccines against pathogens for which the immune system is naïve. There are cases, however, where we are not yet able to make vaccines. Examples are HIV, where the virus changes so rapidly that vaccines are not effective, or malaria, where the antigenic profile is very complex, and we struggle to make effective vaccines.

Vaccines for a Primed Immune System.

Some of the vaccines described above, when delivered to adolescents, adults, or the elderly, may find an immune system that has already been exposed to the antigen, following natural infection or by other microorganisms carrying cross-reacting antigens ([Fig. 3B](https://www.pnas.org/content/118/3/e2020368118#F3)). In this case, the immune system is not naïve any longer, and the vaccines are required to modify the preexisting immunity of antigen-experienced people. Seasonal influenza is probably the best example. In this case, we deliver a vaccine specific for a new influenza virus strain to an immune system that has already gone through the process of developing the response to the same antigen and has already generated specific memory B and T cells. The new vaccine quickly expands the preexisting memory B cells and, at the same time, triggers the expansion and affinity maturation of naïve B cells ([38](https://www.pnas.org/content/118/3/e2020368118#ref-38)). However, it is clear that the first exposure to the antigen has already shaped forever the way the immune system reacts to subsequent encounters with the same antigen. This phenomenon is known as “antigenic sin” ([39](https://www.pnas.org/content/118/3/e2020368118#ref-39)). Another recent example is vaccination against dengue virus. In this case, a vector-based vaccine was effective in boosting a preexisting immunity in seropositive people, while it was unable to effectively prime the naïve immune system of naïve children where it induced antibody-dependent disease enhancement, which increased the risk of hospitalization ([40](https://www.pnas.org/content/118/3/e2020368118#ref-40)). Meningococcal and pneumococcal conjugate vaccines are another example ([41](https://www.pnas.org/content/118/3/e2020368118#ref-41)). When they are given to naïve infants, they prime the immune system to the new antigen, and it takes at least two immunizations to have a good immune response. However, when the same vaccine is given to adolescents or the elderly, who have already been exposed to these pathogens, one dose of vaccine is sufficient to get an excellent immune response. Although there are no definitive studies in humans describing the germinal center response in this context, it is likely that the single vaccination elicits an immediate antibody response—probably by an extrafollicular transformation of memory B cells into plasma cells—and then the immune system becomes refractory to any booster immunization for a long period (as long as 2 y). In this period, more affinity maturation happens, and new memory B cells are generated. Only after that, the immune system is ready to respond to a booster immunization with a massive level of antibodies which can be as high as 10 times the response to the first immunization ([41](https://www.pnas.org/content/118/3/e2020368118#ref-41)). Unfortunately, we do not have animal models able to reproduce what is described in the examples above, and we do not have a mechanistic understanding of what it takes to vaccinate an “experienced” immune system. The absence of animal models and the lack of knowledge are serious limitations for the development of new vaccines that target pathogens to which most people have already been exposed by natural infection.

A big and urgent example in this category is bacteria resistant to antibiotics and responsible for recurrent infections. AMR is a slowly evolving pandemic, with predicted catastrophic consequences for health and economy during the next 10 to 20 y ([42](https://www.pnas.org/content/118/3/e2020368118#ref-42)). Vaccines can help to tackle AMR ([43](https://www.pnas.org/content/118/3/e2020368118#ref-43)). We urgently need vaccines for pathogenic Escherichia coli, Staphylococcus aureus, Clostridium difficile, Klebsiella pneumoniae, Pseudomonas aeruginosa, Neisseria gonorrhoeae, Salmonella typhi, Shigella, Acinetobacter baumannii, Enterococcus faecium, and Campylobacter ([Fig. 3B](https://www.pnas.org/content/118/3/e2020368118#F3)). Experimental vaccines against some of these pathogens are based on proteins or polysaccharides which induce normal or low response to the first vaccination when tested in naïve mice, followed by a better response to the second and third vaccinations. However, when adult volunteers were immunized with the same vaccines, a strong response was observed already after the first immunization, with no increased response to the second vaccination (at least in the short term). The main reason for this is that adult volunteers have already been colonized by these bacteria or by their relatives, and they already have memory B and T cells that recognize them and respond to vaccination. In this setting, adjuvants failed to increase the antibody response. The consequence is that, during vaccine development, in most cases, we make the choice to make a one-dose vaccine without adjuvant ([44](https://www.pnas.org/content/118/3/e2020368118#ref-44)). However, we are not sure whether this is the right choice for long-term protection, and some of the vaccines failed even the primary efficacy endpoint ([45](https://www.pnas.org/content/118/3/e2020368118#ref-45)). While we do not yet fully understand the mechanistics of immunizing a primed immune system, or the lack of a protective immune response that allows reinfection, we have enough technologies and empirical knowledge to develop new vaccines for AMR. Similarly, we have enough knowledge to develop vaccines for some viral diseases such as respiratory syncytial virus, dengue, and Zika viruses even in adults and the elderly, where the immune system has been usually primed by natural infection.

Vaccines for an Immune System Primed by Controlled Chronic Infections.

The difficulty of making vaccines increases when the immune system not only has already been primed by the exposure to the pathogen but somehow has already been defeated by it. The immune system has not been able to clear the pathogen, which has established a lifelong chronic infection. In some cases, once chronic infections are established, the immune system is still able to keep at bay the pathogen for most of the time. This is the case for herpes viruses (zoster, HSV1 and HSV2, EBV, and CMV) and for bacteria such as Mycobacterium tuberculosis ([Fig. 3C](https://www.pnas.org/content/118/3/e2020368118#F3)). The pathogen establishes a latent infection and persists quietly in the body without causing disease. However, due to concomitant infections, immunosuppressive pharmacological treatments, or aging, the immune system becomes weak, and the pathogen takes over, causing disease.

Up to a few years ago, we had not a single example of a successful vaccine against chronic infections. It took us 20 y of research to start conquering some of them. The first step in this direction was the licensure of the live attenuated vaccine against herpes zoster in 2006 ([46](https://www.pnas.org/content/118/3/e2020368118#ref-46)). Although this vaccine was not able to eliminate the chronic infection, it was able to keep the chronic virus silent and avoid reactivation in 60% of the cases. Recently, a new vaccine composed of a protein antigen and the potent AS01 adjuvant (a liposome containing a TLR4 agonist and a saponin) showed an efficacy of 97% against herpes zoster ([47](https://www.pnas.org/content/118/3/e2020368118#ref-47)). This was followed by encouraging results against tuberculosis, where the combination of a protein antigen and the AS01 adjuvant was able to prevent reactivation and disease in 50% of the chronically infected people ([48](https://www.pnas.org/content/118/3/e2020368118#ref-48)). The successful vaccines against herpes zoster and the encouraging results against tuberculosis represent an incredible milestone in the history of vaccination, because, for the first time, we have been able to make effective vaccines against chronic infections.

Vaccines for a Primed and Failed Immune System.

There are cases in which the immune system has been exposed to pathogens and has been completely defeated. Examples are chronic infections, such as HIV, papillomavirus, hepatitis C virus (HCV), hepatitis B virus (HBV), and cancer, where the immune system is not able to control the pathogen or the cancer cells, which continue to replicate forever ([Fig. 3D](https://www.pnas.org/content/118/3/e2020368118#F3)). So far, we have not been able to make successful vaccines against these diseases, and we do not have the scientific knowledge to make them. However, even this area is not without hope, because the progress made by immunotherapy in the area of cancer has shown that the defeated immune system is characterized by dormant regulatory T cells that can be activated using antibodies against the checkpoint inhibitors, removing the constrains imposed on the immune system ([49](https://www.pnas.org/content/118/3/e2020368118#ref-49)). The success of immunotherapy in the field of cancer and the increased understanding of mechanistic features of the defeated immune system suggest that, in the near future, vaccination may also be able to conquer cancer and chronic diseases.

**Conclusions**

The urgent need for COVID-19 vaccines has accelerated the time required to develop vaccines and the availability of powerful technologies. It is possible that evolution of the new technologies fast-tracked for COVID-19 (RNA vaccines, viral vectors, and protein-based vaccines with potent adjuvants) combined with the learning coming from immunotherapy will be the answer for some of the new challenges of modern society such as emerging infections, AMR, chronic infections, **and cancer**. For instance, RNA vaccines and viral vectors may be designed to encode not only antigens but also molecules able to reactivate the dormant immune system.

### 1NC – AT: Advantage 2

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

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.

#### 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.

#### Vote neg to allow the system to collapse—a degrowth paradigm is possible from within the shell of the current system—any evidence to the contrary is from neoliberal hacks

Alexander, 20

(Samuel is a lecturer with the Office for Environmental Programs, University of Melbourne, Melbourne, VIC, Australia. He is also a research fellow with the Melbourne Sustainable Society Institute, Postcapitalism by design not disaster. The Ecological Citizen 3(Suppl B): 13–21. NL)

This article examines how to proactively design the end of capitalism rather than simply waiting for its collapse. It argues that capitalism is unable to resolve the emerging crises, for capitalism cannot function without economic growth, yet for ecological reasons economic growth cannot continue. However, there is a coherent alternative political economy – degrowth – and the emergence of various grassroots alternatives that, suitably scaled up, could help to form a post-capitalist economy. But our culture is not yet ready to embrace degrowth, with consumer affluence and techno-optimism still at the heart of mainstream conceptions of the ‘good life’. Nonetheless, it is important to keep alive these ideas of what an ecocentric, post-capitalist economy could look like, for in a crisis what today seems impossible or implausible can suddenly become possible and even probable. This article addresses the subject of post-capitalist political economy. That is an intimidating topic, especially since transcending capitalism will be a monumental task. Capitalism certainly is not going to lie down like a lamb at the polite request of left-leaning environmentalists. What this means is that sustainability and justice advocates with radical visions of societal futures need to think very carefully about the question of strategy. More specifically, we must confront the question of where and how to invest our time, energy and resources, if we genuinely seek a fundamentally different type of economic system ‘beyond capitalism.’1 Attempting to save capitalism through so-called ‘green growth’ is increasingly recognized as little more than neoliberal ideology, the function of which is to entrench the status quo while pretending to change (Smith, 2016; Hickel and Kallis, 2019). And yet hopes for an imminent proletarian uprising that abolishes capitalism and erects an eco-socialist utopia governed by an enlightened centralized state seems equally misconceived. This paucity of hope has led critical theorist Frederic Jameson (2003) to note that it is now easier to imagine the end of the world than the end of capitalism, although perhaps that says more about a sterility of contemporary political imagination than it does about our future. This exploratory article will share some thoughts on what might come after capitalism and how we might manage and drive this transition by design rather than disaster. I say by design not disaster, hinting at a certain optimism, however it will become clear that there is, in fact, an underlying pessimism that shapes my perspective – a pessimism which some readers might share. Or, perhaps rather than ‘pessimism,’ a better term to describe my orientation might be ‘apocaloptimism.’ This neologism can be defined as the view that ‘everything is going to hell but that things might still turn out okay.’ While in truth I am neither apocalyptic nor optimistic, this term does evoke something of the grounded but cautious hope that will inform my analysis. It will be argued that deepening crisis in the current system is probably unavoidable now; for a range of reasons, our time for a smooth transition may have passed. Nevertheless, I certainly will not use that to justify inaction or despair; quite the opposite. Indeed, the instability created by systemic crisis may be one of the prerequisites for deep societal change – unsettling though that is to admit. Our challenge will be to turn deepening crises, as they emerge, into opportunities to create something other than capitalism: a post-capitalist society that better accords with our shared ideals for social justice, ecological viability and human flourishing. If capitalism is coming to an end in coming years or decades as it collides with various ecological and financial limits, we can ask ourselves: how can we proactively design the end of capitalism rather than wait for its collapse? Or even, if necessary, how can we design the collapse of capitalism in ways that makes the best of a bad situation? These are the questions of an apocaloptimist. Over the last ten years I have been part of a movement advocating for a ‘degrowth’ process of planned economic contraction (Alexander, 2009, 2015a, 2015b; Alexander and Gleeson, 2019). In what follows I am going to use this alternative economic paradigm to frame and analyse the political economy of post-capitalism. I don’t expect anyone to like the terminology of degrowth – I know very well it is an ugly term – and it may never be the banner under which a social or political movement marches. But as a slogan for justice and sustainability, I maintain that degrowth captures an essential insight: it directly evokes, more clearly than any other term, the need for planned contraction of the energy and resource demands of overgrown or ‘developed’ economies. That is an agenda that mainstream environmental and social discourse refuses to acknowledge, because significant contraction of energy and resource demands is incompatible with ongoing growth in GDP. This growth fetish must be overcome (Hickel and Kallis, 2019). The following sections offer some thoughts on why the degrowth paradigm signifies the most coherent political economy for a post-capitalist society and how such a transition might unfold. I will also highlight the role grassroots social movements and alternative economic experiments may need to play prefiguring degrowth economies and creating the cultural conditions for a politics and macroeconomics of degrowth to emerge. Prerequisites for a degrowth transition Recently the Danish political economist Hubert Buch-Hansen (2018) published a paper which outlined a conceptual framework that is useful for thinking about how paradigm shifts in political economy occur. He argues that there are four main prerequisites. There must be: 1 a crisis or series of crises that cannot be resolved within the existing political economy; 2 a coherent alternative political project; 3 a comprehensive coalition of social forces attempting to produce the alternative paradigm through political struggle and social activism; 4 broad-based cultural consent – even passive consent – for the new paradigm. I am going to adopt this framework, add my own analytical flesh to its theoretical bones, and use it to discuss the question of a degrowth transition to a post-capitalist society. I hope this provides a useful and provocative broad-ranging analysis to get this special issue underway, although I am sure I will raise more questions than I answer. Capitalism is not in crisis – capitalism is the crisis The first prerequisite, then, for a paradigm shift in the existing political economy is crisis – but not just any crisis. It must be a crisis or series of crises in the system that the system itself cannot resolve. There are many reasons to think this prerequisite is met. Growth economics is sometimes called the ‘ideology of the cancer cell,’ and this provocative metaphor neatly summarizes the fatal anomaly in capitalism, namely, that on the one hand, it must keep growing for stability, and, on the other hand, for various ecological and financial reasons, it simply cannot keep growing. Like a chorus of others, I do not believe capitalism can resolve this fundamental contradiction, which is creating conditions for a new, postcapitalist paradigm to replace it. Today, a range of theorists (from radical reformers, to eco-anarchists and eco-socialists) argue that degrowth is a necessary feature of any coherent macroeconomic alternative (Kallis et al., 2018). The clearest way to understand the multidimensional crisis of capitalism is to grasp the so-called ‘limits to growth’ predicament, which I will now review very briefly, and this will also help frame and define the post-capitalist alternative of degrowth. Limits to growth: A restatement By a wide range of indicators, the global economy is now exceeding the sustainable carrying capacity of the planet. Climate change is perhaps the most prominent ecological transgression, but there is also biodiversity loss, resource depletion, pollution, deforestation, and a long list of other deeply unsustainable impacts. In the haunting words of James Lovelock (2010), the face of Gaia is vanishing. It is important to understand the extent of ecological overshoot, because responding appropriately to the global predicament depends on a clear understanding of our situation. The ecological footprint analysis indicates that humanity would need 1.7 planets if the existing global economy could be sustained over the long term (Global Footprint Network, 2019). If the United States or Australian way of life were globalized to the world’s population, humanity would need four or five planets worth of biocapacity, implying a need to reduce our ‘first world’ impacts by 75% or more. Despite the global economy being in this state of ecological overshoot, it is also known that billions of people on the planet are, by any humane standard, underconsuming (Hickel, 2017). If these people are to raise their living standards to some dignified level of material sufficiency, as they have every right to do, it is likely that this will place further burdens on already overburdened ecosystems. To make matters more challenging still, there are now 7.7 billion people on Earth, increasing by about 200,000 people everyday. Recent projections from the United Nations suggest we are heading for around 9.7 billion by mid-century and 11 billion by 2100. All this calls radically into question the legitimacy of continuous economic expansion and rising material living standards in rich nations. And yet, despite the fact that humanity is already making grossly unsustainable demands on a finite biosphere, all nations on the planet – including or especially the richest nations – are seeking to grow their economies without apparent limit. It is assumed that a larger economy is always better; that ongoing growth is necessary for ‘progress.’ One does not have to be a sophisticated thinker to see that this is a recipe for ecological disaster, although alarmingly this point seems to be lost on almost all politicians and most economists. Capitalism cannot resolve its ecological contradictions In theory, there are two broad ways to respond to the limits to growth predicament within capitalism. The first is to try to create a form of capitalism that deliberately stops growing and actually voluntarily contracts in order to operate within sustainable limits. The problem here is that there are various growth imperatives built into the structure of capitalism, which makes the notion of ‘degrowth capitalism’ a contradiction in terms (to be distinguished of course from capitalism in recession, which is unplanned economic contraction). Therefore, the only other means of resolving the limits to growth predicament within capitalism is to radically decouple economic activity from environmental impact through what is called ‘green growth.’ The hope here is that technological innovation, market mechanisms and efficiency improvements will reduce energy and resource demands even as economies continue to grow in terms of GDP. Nice in theory, perhaps, but what is happening is that the absolute reductions in energy and resource demands needed for sustainability are not occurring – certainly not to sufficient degrees – and as the global economy seeks ongoing growth, absolute decoupling gets harder and harder to achieve (Kallis, 2017; Hickel and Kallis, 2019). Efficiency without sufficiency is lost. This brings us to the most egregious flaw in growth economics, which is the apparent failure to understand the exponential function and its ecological implications. Post-growth economist Tim Jackson (2009) has shown that if the OECD nations grew their economies by a modest 2% over coming decades and by 2050 a global population of nine billion had achieved similar income per capita, the global economy would be fifteen times larger than it is today. It is obvious that ecological limits will not permit that scenario to eventuate. Even an economy twice as large as today’s economy would surely wreak ecological havoc. The critical point is that the degree of ‘decoupling’ required to make ongoing growth ‘sustainable’ is simply too great. So capitalism wants or needs what it cannot have: that is, limitless growth on a finite planet. This ecological predicament is the defining contradiction of capitalism in the 21st century, insofar as growth is now causing the problems that growth was supposed to be solving. This suggests that the first prerequisite of a paradigm shift in political economy is well and truly met: capitalism is facing a multi-dimensional crisis that it cannot resolve, and therefore, sooner or later, capitalism will come to an end. The question of our time, as stated in my introductory comments, is how to make the transition beyond capitalism by design rather than disaster. The crisis of ecological overshoot also provides insight into what any alternative must look like. Broadly speaking, the implications here are clear but radical: if the global economy is to operate within the sustainable carrying capacity of the planet, this requires (among other things) the richest nations to initiate a degrowth process of planned economic contraction, on the path to a ‘steady state’ economy of stable and sustainable biophysical throughput. Obviously, the poorest nations would also need to achieve some ‘steady state’ in time, but first their economic capacities must be developed in some appropriate form to ensure basic needs for all are met. However, the focus of this discussion is the wealthy nations. An alternative political project The second prerequisite for a paradigm shift in political economy – for a degrowth transition, in particular – is the existence of an alternative political project. This is not the forum to comprehensively defend this alternative political project, so I am just going to state it, or one version of it, in order to show that an alternative post-capitalist political project is beginning to take form. The following political agenda is, in my view, both coherent and attractive, but it is, all too obviously, disconnected from political ‘realism’ in developed nations (or anywhere) today. Of course, I would argue that this is an indictment of mainstream politics, rather than of degrowth. However, the political and social unpalatability of degrowth is a point to which I will return, because it has implications for the question of strategy. But as an exercise in political imagination, these policies could initiate a transition to a degrowth society. n Alternatives to GDP: Any political transition beyond capitalism requires transcending the GDP fetish (Hamilton, 2003) and establishing better and more nuanced ways to measure societal progress, such as the Genuine Progress Indicator (see Kubiszewski et al. [2013]). Post-growth measures of progress like this open up space for political parties to implement policy and institutional changes – including those which I am about to review – which would genuinely improve social wellbeing and enhance ecological conditions, even if these would not increase, and probably even decrease, GDP. n Diminishing resource caps: If the rich, overgrown economies are serious about moving toward a just and sustainable human inhabitation of Earth, then first, we must acknowledge that we are hugely over-consuming our fair share of global resources, and second, we must institute diminishing resource caps which put strict limits on national resource flows. Fortunately, this would incentivize the efficient use of resources and disincentivize waste, and lead to degrowth in ecological impacts. Eco-socialists would argue that reducing societal material and energy flows will require significant nationalization of key industries for stability during the planned contraction (e.g. Smith, 2016) whereas eco-anarchists would argue that a confederation of small self-governing communities would be the better path (e.g. Trainer, 2010). This debate is likely to continue (Alexander and Burdon, 2017) and it may be this controversy can only be resolved through practical experimentation not theory. n Reduced working hours (in the formal economy): One obvious implication of diminishing resource caps is that a lot less resource-intensive production and consumption would take place in a degrowth economy. This would almost certainly lead to reduced GDP. To avoid the unemployment that typically flows from declining GDP, a degrowth economy would reduce work in the formal economy and share available work amongst the working population. Financial security in a contracting economy could be maintained through policies such as a Universal Basic Income, Universal Basic Services or a Job Guarantee. n Rethink government spending: Currently, governments shape many of their policies and spend much of their money in order to promote economic growth. Under a degrowth paradigm, it follows that the ways government spend their funds would need to be fundamentally reconsidered. For example, fewer airports, roads, and military equipment; more bike lanes and public transport. How we spend our money is one way to vote for what exists in the world. Rethinking government spending would also need to go hand in hand with transformations in the systemic provision of basic services. For example, Cubans have better health on average than US citizens and yet spend an estimated 90% less on healthcare per capita (Hamblin, 2016). This suggests that there is ample room to provide for basic services in an affordable way while also making more public money available to fund other social projects (like a Universal Basic Income or renewable energy technologies). n Renewable energy transition: In anticipation of the foreseeable stagnation and eventual decline of fossil fuel supplies, and recognizing the grave dangers presented by climate change, a degrowth economy would divest from fossil fuels and invest in a renewable energy transition with the urgency of ‘war time’ mobilization. This will be much more affordable and technically feasible if energy demand across society is greatly reduced, and that is a key feature of a degrowth society (Alexander and Floyd, 2018). The energy transition needed cannot just involve ‘greening’ the supply of energy, it must also involve greatly reduced demand. This means anticipating and managing what David Holmgren calls ‘the energy descent future’ (Holmgren, 2018). n Banking and finance: Our systems of banking and finance currently have a growth imperative built into their structures. Any degrowth society would have to create systems that did not require growth for stability. Debt jubilees would probably be required, especially with respect to the poorest nations. These are particularly complex issues and the forces of opposition will be fierce. But the point is that any post-growth transition is going to require deep changes to the most fundamental financial institutions of capitalism. n Population policies: This is always controversial territory, especially in an age of Trump, but the environmental logic is compelling. As population grows, more resources are required to provide for the material conditions of human wellbeing. As Paul Ehrlich once said, “whatever problem you’re interested in, you’re not going to solve it unless you also solve the population problem.” I will not suggest specific policies here; the point is that we need to discuss this topic openly and with all the wisdom and compassion we can muster (e.g. Kuhleman, 2018). Population policy must be part of any coherent politics of sustainability in recognition that we live on a ‘full Earth.’ n Distributive justice: Last but not least, environmental concerns cannot be isolated from social justice concerns, both nationally and globally. The conventional path to poverty alleviation is via the strategy of GDP growth, on the assumption that a ‘rising tide will lift all boats.’ A degrowth economy would recognize that a rising tide will sink all boats, and thus poverty alleviation must be achieved much more directly. Rather than growing the economic pie, a politics of degrowth would slice the economic pie differently through a major redistribution of wealth and power. Prominent policies in this space include the notion of a Universal Basic Income, while others argue for a Job Guarantee, or Universal Basic Services (see Mitchell and Wray [2005] and Frankel [2018]). These types of policies would go a long way to directly eliminating poverty, with inequality further reduced by policies such as maximum wage legislation, and progressive wealth, income and land taxes. Again, eco-socialists would argue that a just distribution of wealth and power would have to involve significant socialization of property and curtailment of ‘the market.’ How far socialization would need to go, and the nature of such a transformation, is obviously open to debate. These policy platforms – all in need, of course, of far more elaboration and discussion – are coherent political, economic and social goals if a transition to a degrowth society were recognized as necessary. Each of these policies could take various forms, and there is, and should be, debate within the degrowth movement and beyond about various ways to structure a post-capitalist society. But my present point is simply that a relatively coherent and developed alternative politicoeconomic project is emerging to replace the capitalist paradigm. So, the second prerequisite for a paradigm shift is also arguably present, which is to say: there is a coherent, alternative political economy. Nevertheless, as implied above, I am the first to admit that this policy platform, coherent though it may be (to my mind), is so unpalatable to the dominant cultural consciousness that it would be political suicide for any political party to try to implement it at present. In other words, what is arguably politically necessary is both socially and politically unthinkable – which is one reason, no doubt, for our current state of despairing political paralysis. Because of this situation, whereby the politically necessary is unthinkable, I would argue that the policy platform outlined is unlikely to initiate a degrowth transition, but will only ever be the outcome of social movements; the outcome, that is, of social forces that emerge out of crisis or a series of crises and which actively create the cultural consciousness that see policies for degrowth as both necessary and desirable (Alexander and Gleeson, 2019). It is through crisis that I see the citizenries in affluent societies being shaken awake from the depoliticizing effects of affluence. Encountering crises can play, and might have to play, an essential consciousnessraising role, if it triggers a desire to learn about the structural underpinnings of the crisis situation itself. While I do not deny the need for, and desirability of, deep structural changes in the nature of our economic and political systems, what I am proposing is that a post-capitalist government may only be the outcome, not the driving force, of a transition to a just and sustainable society. In other words, our best hope for inducing a degrowth transition by design is to build a post-capitalist economics ‘from below,’ within the shell of the current system that is currently in the process of deteriorating (Alexander and Burdon, 2017). Waiting for government to act would be like waiting for Godot – a tragi-comedy in two acts, in which nothing happens, twice. Support from a comprehensive coalition of social forces This leads me to the third prerequisite for a degrowth transition, and that is that it must have support from a comprehensive coalition of social forces. Again, space does not permit an in-depth review of these issues, but a few comments will be made on examples of post-capitalist grassroots activities that are exploring modes of economy that are transcending the profit-motive for the common good, or simply building new forms of informal or household economies ‘beyond the market.’ These can easily be seen to be prefiguring aspects of a degrowth economy, even if this terminology is not used. Four key features of post-capitalism that I see emerging from the grassroots – features which I feel must scale up for a degrowth economy to emerge – are as follows. 1 Non-monetary forms of the sharing economy, whereby communities selforganize to share resources in order to save money, partially ‘escape the market,’ and avoid significant amounts of production (Nelson, 2018). Indeed, this is a key feature of why a degrowth economy could still thrive even when contracting in GDP terms: produce much less but share much more, for societies can create common wealth through sharing. This is part of what ‘efficiency’ means in a degrowth economy. 2 A degrowth economy is likely to require a transformation of the household economy: from being merely a place of consumption, to becoming a place of production and self-provision. On this topic there is no better place to look than the work of permaculturist, David Holmgren (2018), whose vision and insights here are indispensable. There are two main reasons why a resurgence of household economies is central to a degrowth paradigm shift (Alexander and Gleeson, 2019): First, by producing more within the household, less time is needed to work in the formal economy, leaving more time outside the market for social activism and community engagement. This strategy is about escaping capitalism in order to erode it, that is, building the new economy within the shell of the old. Secondly, if financial crises deepen in coming years, the household economy may be an essential means of meeting basic needs, so the task is to prepare now for what may well prove to be harder economic times ahead. We should aim for sustainability, but we may have to settle for resilience. 3 A key feature of a degrowth economy involves significant localization of the economy, moving toward a ‘bioregional’ economy where local needs are predominantly met with local resources, shortening the chain between production and consumption (Trainer, 2010). 4 Finally, any post-capitalist economy is going to require new modes of production, moving away from profitmaximizing corporations (often owned by absentee shareholders), towards an economy where worker cooperatives, community enterprises and not-forprofit models are the dominant forms of economic organization, paying people living wages but reinvesting surpluses back into the local community (Albert, 2004; Gibson-Graham et al., 2013). Again, there are various ways to imagine such alternative economic arrangements. Experimentation may be required as societies pursue the goal of creating economic and social systems in which more wealth and power are held in common, rather than concentrating it in private hands. It seems to me that alternative modes of economy, such as these four, are bubbling everywhere under the surface, which is a hopeful sign. The Transition Towns Movement, for example, is a coherent manifestation of this grassroots approach to building local, community economies. But one must also admit that these transgressive experiments remain small and marginalized by the dominant modes of political economy. So, in terms of the third prerequisite for a post-capitalist transition, we have to conclude that the social forces are mobilizing but have not yet been able to scale up to positively disrupt, or even significantly threaten, the dominant paradigm. Cultural consent: The sufficiency imperative The final prerequisite for a post-capitalist degrowth transition is broad-based cultural consent. Passive consent may suffice here, without the majority of people actively seeking degrowth. This really is a critical element in any planned transition in political economy and one that currently does not exist in terms of degrowth. It seems that the majority of people either do not think degrowth (or what it represents) is necessary or, if they do, they do not like what it means in terms of reduced and transformed consumption and production practices. I think there are two main reasons why culture is not ready to embrace degrowth. The first reason is a deep-seated technooptimism that shapes cultural thinking about environmental problems. This view assumes that technology and market mechanisms will be able to resolve the crises of capitalism without system change and without even much in terms of ‘lifestyle’ change. In other words, the zeitgeist seems to be that consumer affluence is consistent with justice and sustainability, because it is assumed that efficiency improvements in modes of production will be able to produce ‘green growth’ without having to rethink consumption practices (Hickel and Kallis, 2019). Although this techno-optimistic blind spot is a major obstacle to degrowth, I hold some uneasy confidence that as capitalism continues to collide with ecological limits in coming years and decades, the case for degrowth will become clearer to more and more people, which could act as a mobilizing force. However, even if the crises of capitalism deepen and the majority of people come to desire a post-capitalist political economy, it does not follow that a degrowth economy is what they would demand. This points to a serious cultural obstacle to a degrowth transition: the fact that the dominant conception of the good life under capitalism is based on consumer affluence. It seems to me that there will never be a post-capitalist politics until there is a post-consumerist culture that is prepared to embrace material sufficiency as a desirable way of life (Alexander, 2015b). Herein lies the importance of the voluntary simplicity, simple living and downshifting movements. Although in need of radicalization (and organization for collective action), these movements or subcultures are beginning to create the cultural conditions needed for a politics and economics of degrowth to emerge. It all depends on the ideas (and practices) that are lying around When the crises of capitalism deepen – perhaps in the form of a new financial crisis or a second Great Depression – the task will be to ensure that such destabilized conditions are used to advance progressive humanitarian and ecological ends, rather than exploited to further entrench the austerity politics of neoliberalism. I recognize, of course, that the latter remains a real possibility, as did the archcapitalist Milton Friedman (2002: xiv), who expressed the point in these terms: Only a crisis – actual or perceived – produces real change. When that crisis occurs, the actions that are taken depend on the ideas that are lying around. That, I believe, is our basic function: to develop alternatives to existing policies, to keep them alive and available until the politically impossible becomes the politically inevitable. I do not often find myself in complete agreement with Milton Friedman, but on this point I am. It is essential for the ecocentric community to keep hopes of a radically different and more humane form of society alive, until what today seems impossible or implausible becomes, if not inevitable, then at least possible and perhaps even probable. And on those rare occasions when despair lifts and the human spirit shows itself in noble forms, ‘the ideas that are lying around’ and indeed ‘the practices that are lying around,’ look so strong and convincing that it tempts even this apocaloptimist into considering becoming a plain, old-fashioned optimist. Or, with a nod to Gramsci, at least one is permitted to proceed with a pessimistic intellect and a cautiously optimistic will.

#### No Economic Transition Wars – prefer post-COVID evidence

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

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

#### Growth-oriented AI causes Extinction but de-growth orientation solves

Pueyo 18, Salvador. "Growth, degrowth, and the challenge of artificial superintelligence." Journal of Cleaner Production 197 (2018): 1731-1736. (Department of Evolutionary Biology, Ecology, and Environmental Sciences, Universitat de Barcelona)//Re-cut by Elmer

The challenges of sustainability and of superintelligence are not independent. The changing 84 fluxes of energy, matter, and information can be interpreted as different faces of a general acceleration2 85 . More directly, it is argued below that superintelligence would deeply affect 86 production technologies and also economic decisions, and could in turn be affected by the 87 socioeconomic and ecological **context in which it develops**. Along the lines of Pueyo (2014, p. 88 3454), this paper presents an approach that integrates these topics. It employs insights from a 89 variety of sources, such as ecological theory and several schools of economic theory. 90 The next section presents a thought experiment, in which superintelligence emerges after the 91 technical aspects of goal alignment have been resolved, and this occurs specifically in a neoliberal 92 scenario. Neoliberalism **is a major force shaping current policies** on a global level, which urges 93 governments to assume as their main role the creation and support of capitalist markets, and to 94 avoid interfering in their functioning (Mirowski, 2009). Neoliberal policies stand in sharp contrast 95 to degrowth views: the first are largely rationalized as a way to enhance efficiency and production 96 (Plehwe, 2009), and represent the maximum expression of capitalist values. 97 The thought experiment illustrates how superintelligence perfectly aligned with capitalist 98 markets could have very **undesirable consequences for humanity and the whole biosphere**. It also 99 suggests that there is little reason to expect that the wealthiest and most powerful people would be 100 exempt from these consequences, which, as argued below, gives reason for hope. Section 3 raises 101 the possibility of a broad social consensus to respond to this challenge along the lines of degrowth, 102 thus tackling major technological, environmental, and social problems simultaneously. The 103 uncertainty involved in these scenarios is vast, but, if a non-negligible probability is assigned to 104 these two futures, little room is left for either complacency or resignation. 105 106 2. Thought experiment: Superintelligence in a neoliberal scenario 107 108 Neoliberalism is creating a very special breeding ground for superintelligence, because it strives 109 **to reduce the role of human agency in collective affairs**. The neoliberal pioneer Friedrich Hayek 110 argued that the spontaneous order of markets was preferable over conscious plans, because markets, 111 he thought, have more capacity than humans to process information (Mirowski, 2009). Neoliberal 112 policies are actively transferring decisions to markets (Mirowski, 2009), while firms' automated 113 decision systems become an integral part of the market's information processing machinery 114 (Davenport and Harris, 2005). Neoliberal globalization is locking governments in the role of mere 115 players competing in the global market (Swank, 2016). Furthermore, automated governance is a 116 foundational tenet of neoliberal ideology (Plehwe, 2009, p. 23). 117 In the neoliberal scenario, most technological development can be expected to take **place either in the context of firms** or in support of firms3 118 . A number of institutionalist (Galbraith, 1985), post119 Keynesian (Lavoie, 2014; and references therein) and evolutionary (Metcalfe, 2008) economists 120 concur that, in capitalist markets, firms tend to maximize their growth rates (this principle is related 121 but not identical to the neoclassical assumption that firms maximize profits; Lavoie, 2014). Growth 122 maximization might be interpreted as expressing the goals of people in key positions, but, from an 123 evolutionary perspective, it is thought to result from a mechanism akin to natural selection 124 (Metcalfe, 2008). The first interpretation is insufficient if we accept that: (1) in big corporations, the 125 managerial bureaucracy is a coherent social-psychological system with motives and preferences of 126 its own (Gordon, 1968, p. 639; for an insider view, see Nace, 2005, pp. 1-10), (2) this system is 127 becoming techno-social-psychological with the progressive incorporation of decision-making 128 algorithms and the increasing opacity of such algorithms (Danaher, 2016), and (3) human mentality 129 and goals are partly shaped by firms themselves (Galbraith, 1985). 130 The type of AI best suited to participate in firms' decisions in this context is described in a 131 recent review in Science: AI researchers aim to construct a synthetic homo economicus, the 132 mythical perfectly rational agent of neoclassical economics. We review progress toward creating 133 this new species of machine, machina economicus (Parkes and Wellman, 2015, p. 267; a more 134 orthodox denomination would be Machina oeconomica). 135 Firm growth is thought to rely critically on retained earnings (Galbraith, 1985; Lavoie, 2014, p. 136 134-141). Therefore, economic selection can be generally expected to favor firms in which these are greater. The aggregate retained earnings4 137 RE of all firms in an economy can be expressed as: 138 RE=FE(R,L,K)-w⋅L-(i+δ)⋅K-g. (1) 139 Bold symbols represent vectors (to indicate multidimensionality). F is an aggregate production 140 function, relying on inputs of various types of natural resources R, labor L and capital K (including intelligent machines), and being affected by environmental factors5 141 E; w are wages, i are returns to 142 capital (dividends, interests) paid to households, δ is depreciation and g are the net taxes paid to 143 governments. 144 Increases in retained earnings face constraints, such as trade-offs among different parameters of 145 Eq. 1. The present thought experiment explores the consequences of economic selection in a 146 scenario in which two sets of constraints are nearly absent: sociopolitical constraints on market 147 dynamics are averted by a neoliberal institutional setting, while technical constraints are overcome 148 by **asymptotically advanced technology** (with extreme AI allowing for extreme technological 149 development also in other fields). The environmental and the social implications are discussed in 150 turn. Note that this scenario is not defined by some **contingent choice of AIs' goals by their 151 programmers**: The goals of maximizing each firm's growth and retained earnings are assumed to 152 emerge from the collective dynamics of large sets of entities subject to **capitalistic rules of 153 interaction and, therefore, to economic selection**.

#### Economic decline increases cooperation and reduces war

Christina L. **Davis &** Krzysztof J. **Pelc 17**, Christina L. Davis is a Professor of Politics and International Affairs at Princeton; Krzysztof J. Pelc is an Associate Professor of Political Science at McGill University, “Cooperation in Hard Times: Self-restraint of Trade Protection,” Journal of Conflict Resolution, 61(2): 398-429

Conclusion Political economy theory would lead us to expect rising trade protection during hard times. Yet empirical evidence on this count has been mixed. Some studies find a correlation between poor macroeconomic conditions and protection, but the worst recession since the Great Depression has generated surprisingly moderate levels of protection. We explain this apparent contradiction. Our statistical findings show that under conditions of pervasive economic crisis at the international level, states exercise more restraint than they would when facing crisis alone. These results throw light on behavior not only during the crisis, but throughout the WTO period, from 1995 to the present. One concern may be that the restraint we observe during widespread crises is actually the result of a decrease in aggregate demand and that domestic pressure for import relief is lessened by the decline of world trade. By controlling for product-level imports, we show that the restraint on remedy use is not a byproduct of declining imports. We also take into account the ability of some countries to manipulate their currency and demonstrate that the relationship between crisis and trade protection holds independent of exchange rate policies. Government decisions to impose costs on their trade partners by taking advantage of their legal right to use flexibility measures are driven not only by the domestic situation but also by circumstances abroad. This can give rise to an individual incentive for strategic self-restraint toward trade partners in similar economic trouble. Under conditions of widespread crisis, government leaders fear the repercussions that their own use of trade protection may have on the behavior of trade partners at a time when they cannot afford the economic cost of a trade war. Institutions provide monitoring and a venue for leader interaction that facilitates coordination among states. Here the key function is to reinforce expectations that any move to protect industries will trigger similar moves in other countries. Such coordination often draws on shared historical analogies, such as the Smoot–Hawley lesson, which form a focal point to shape beliefs about appropriate state behavior. Much of the literature has focused on the more visible action of legal enforcement through dispute settlement, but this only captures part of the story. Our research suggests that tools of informal governance such as leader pledges, guidance from the Director General, trade policy reviews, and plenary meetings play a real role within the trade regime. In the absence of sufficiently stringent rules over flexibility measures, compliance alone is insufficient during a global economic crisis. These circumstances trigger informal mechanisms that complement legal rules to support cooperation. During widespread crisis, legal enforcement would be inadequate, and informal governance helps to bolster the system. Informal coordination is by nature difficult to observe, and we are unable to directly measure this process. Instead, we examine the variation in responses across crises of varying severity, within the context of the same formal setting of the WTO. Yet by focusing on discretionary tools of protection—trade remedies and tariff hikes within the bound rate—we can offer conclusions about how systemic crises shape country restraint independent of formal institutional constraints. Insofar as institutions are generating such restraint, we offer that it is by facilitating informal coordination, since all these instruments of trade protection fall within the letter of the law. Future research should explore trade policy at the micro level to identify which pathway is the most important for coordination. Research at a more macro-historical scope could compare how countries respond to crises under fundamentally different institutional contexts. In sum, the determinants of protection include economic downturns not only at home but also abroad. Rather than reinforcing pressure for protection, pervasive crisis in the global economy is shown to generate countervailing pressure for restraint in response to domestic crisis. In some cases, hard times bring more, not less, international cooperation.

#### Growth causes disease

Dr Kwasi **Bowi 9**, president of the Ghana Veterinary Medical Association, “Globalisation: Catalyst for the spread of zoonotic diseases” 8 May 2009. http://www.modernghana.com/news/215180/1/globalisation-catalyst-for-the-spread-of-zoonotic-.html

Zoonotic diseases or zoonoses are those diseases and infections which are naturally transmitted from animals to man Zoonosis is a concept primarily useful to public health and veterinary disease control authorities. It defines an area of cooperative activity in both research and in control. Mutual concern for zoonoses furnishes an opportunity for communication between the physician interested in disease in no-human animals and the veterinarian interested in disease in man. Central to the complex and close relationship linking humans and animals, infections diseases, especially zoonoses, have played a part in shaping the destiny of [hu]mankind. Today, the world human and animal populations in ever-increasing numbers and in a perpetual state of movement and interaction have never been so close together through nature, agriculture and livestock; through the growth of trade in animals and animal products, and through our food. Yet globalisation also encourages the circulation of pathogens and helps to make them more aggressive. The worldwide upsurge in animal diseases, especially zoonoses is a dangerous reality. Dramatic events and spectacular crises serve as constant reminder of the devastating consequences of these emerging and re-emerging diseases and the fear they can arouse. Today, the natural or deliberate spread of these diseases is a threat without precedent in the history of mankind. There are over 134 zoonotic diseases of virus, bacteria, fungi, parasitic or rickettsia origin which can be transmitted from animals to man. These include rabies, anthrax, brucellosis, tuberculosis clostridial diseases like tetanus, ringworm, Echinococcosis, Fish tapeworm, Pork Tapeworm, Salmonellosis and Highly Pathogenic Avian Influenza virus (HPAI) which has already caused outbreak in 62 countries and caused the death of about 140 million birds, 407 human infections with 254 deaths as at March 20, 2009. Modern modes of transportation allow more people and animal products to travel around the world at a faster pace. They also open airways to the transcontinental movement of infectious diseases. One example of this is the West Nile virus. It is believed that this disease reached the United States via "mosquitoes that crossed the ocean by riding in airplane wheel wells and arrived in New York City in 1999. With the use of air travel, people are able to go to foreign lands, contract a disease and not have any symptoms of illness until they get home, having exposed others to the disease along the way. Globalisation, the flow of goods, capital and people across political and geographic boundaries have also helped to spread some of the deadliest infectious diseases especially zoonotic ones known to humans. The spread of diseases across wide geographic scales has increased through history. In the current era of globalisation the world is more interdependent than at any other time. Efficient and inexpensive transportation has left few places inaccessible, increased global trade in agricultural products and brought more and more people in contact with animal diseases that have subsequently jumped species barriers.

#### Counter-forcing solves nuclear war—only a few million at best die.

Mueller 9—Woody Mueller, Chair of National Security Studies, Professor of Political Science at Ohio State University, Cato Senior Fellow, 2009 (“Atomic Obsession: Nuclear Alarmism from Hiroshima to Al-Qaeda,” *Google Books*, October 5th, p. 8)

To begin to approach a condition that can credibly justify applying such extreme characterizations as societal annihilation, a full-out attack with hundreds, probably thousands, of thermonuclear bombs would be required. Even in such extreme cases, the area actually devastated by the bombs' blast and thermal pulse effective **would be limited**: 2,000 1-MT explosions with a destructive radius of 5 miles each would directly demolish **less than 5 percent** of the territory of the United States, for example. Obviously, if major population centers were targeted, this sort of attack could inflict massive casualties. Back in cold war days, when such devastating events sometimes seemed uncomfortably likely, a **number of studies** were conducted to estimate the consequences of massive thermonuclear attacks. One of the **most prominent** of these considered several probabilities. The most likely scenario--one that could be perhaps considered at least to begin to approach the rational--was a "counterforce" strike in which well over 1,000 thermonuclear weapons would be targeted at America's ballistic missile silos, strategic airfields, and nuclear submarine bases in an effort to destroy the country’s strategic ability to retaliate. Since the attack **would not** directly **target population centers**, most of the ensuing deaths would be from radioactive fallout, and the study estimates that from 2 to 20 million, depending mostly on wind, weather, and sheltering, would perish during the first month.15 That sort of damage, which would kill less than 10 percent of the population, might or might not be enough to trigger words like “annihilation.”

#### The McLennan evidence – reject it – it’s just a laundry list of assertions with no explanation of how any of these conflicts escalate