## 1

#### Counterplan Text: The member nations of the WTO should implement the EU’s plan to:

#### 1] Ensure COVID-19 vaccines, treatments, and components can cross borders freely;

#### 2] Encourage producers to expand their production and keep vaccines at an affordable price for countries most in need;

#### 3] Facilitate preexisting compulsory licensing within the TRIPS Agreement.

#### It solves the aff

**Ferrer 21** [Miriam GARCIA FERRER, 4 June 2021, "EU proposes a strong multilateral trade response to the COVID-19 pandemic," https://ec.europa.eu/commission/presscorner/detail/en/ip\_21\_2801]

The EU calls on governments to: **Ensure that COVID-19 vaccines, treatments and their components can cross borders freely; encourage producers to expand their production, while ensuring that those countries most in need of vaccines receive them at an affordable price, and; facilitate the use of compulsory licensing within the WTO's existing Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). The TRIPS Agreement already provides this flexibility, which is a legitimate tool during the pandemic that can be used swiftly where needed** The first element aims to limit the use of export restrictions and keep supply chains open. Vaccine-producing countries should be ready to export a fair share of their domestic production. Supply chains are highly interconnected and should not be disrupted. In addition, the EU considers that supplies to the [COVAX Facility](https://www.gavi.org/covax-facility?gclid=CjwKCAjwqcKFBhAhEiwAfEr7zWjFf077VkgxXglj13ofcgJttDjUkwtrae9qXh-3FiqPC5VtpfhMJxoCQ7kQAvD_BwE) should never be restricted, and no measures should limit trade in inputs necessary for the production of COVID-19 vaccines and treatments. The second element calls on governments to strongly encourage and support vaccine manufacturers and developers to expand production and ensure the affordable supply of vaccines to low- and middle-income countries. Such actions could include licensing agreements, the sharing of expertise, tiered pricing including non-profit sales to low-income countries, contract manufacturing and new investments in manufacturing facilities in developing countries. The EU expects all vaccine producers and developers to make concrete pledges that increase supplies to vulnerable developing countries. In this regard, the EU welcomes the commitment of companies such as BioNTech and Pfizer, Johnson & Johnson and Moderna, which have already committed to delivering 1.3 billion doses this year to low-income countries at no profit and to middle-income countries at lower cost. The third element, on intellectual property, sets out that voluntary licences are the most effective instrument to facilitate the expansion of production and sharing of expertise. Where voluntary cooperation fails, compulsory licences, whereby a government grants a targeted licence allowing a willing producer to make a vaccine without the consent of a patent holder, are a legitimate tool in the context of a pandemic. The EU considers that all WTO members should be ready to: agree that the COVID-19 pandemic is an exceptional circumstance of national emergency, and that the requirement to negotiate with the rights' holder may be legitimately waived where needed; support manufacturers that are ready to produce vaccines and/or treatments at affordable prices under a compulsory licence so that the level of remuneration paid by the manufacturer to the patent holder reflects such affordable prices; agree that the compulsory licence could cover any exports destined to countries that lack manufacturing capacity, including via the COVAX facility.

**The preempt doesn’t solve, it says the procedure of flexibilities and licnensing are burdensome but we fiat the CP so states do them immedietly. Opening trade laws means lincensing doenst lead to legal cases. Solves cred since the I/L is just effective policy**

#### It’s avoids the links to the DAs

**Bacchus 2020** (James, Adjunct Fellow, Cato Institute, former U.S. Representative (D-FL), and former Chairman, World Trade Organization’s Appellate Body. “An Unnecessary Proposal: A WTO Waiver of Intellectual Property Rights for COVID-19 Vaccines,” *Cato* <https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines#balancing-ip-rights-access-medicines-not-new-wto> December 16, 2020)DR 21

Compulsory licensing of medicines is not popular with private drug manufacturers because it is a derogation from the customary workings of market‐​based capitalism. However, as these actions by WTO members in 2001, 2003, and 2017 illustrate, compulsory licensing is not a derogation from the balance **struck by the members of the WTO** between protecting IP rights and ensuring access to essential medicines. Rather, it is a crucial part of that balance. The balance struck in the WTO treaty includes the option of compulsory licensing during health emergencies.

Does a Novel Virus Present Novel Issues?

Now comes the COVID-19 crisis. In the debate over the proposed COVID-19 waiver, mostly we have heard the usual arguments, all of them reminiscent of the HIV/AIDS debate. The pharmaceutical companies in the global vaccine chase have been quick to express their opposition to the proposed waiver of IP rights for the pandemic’s duration. They have warned that allowing their COVID-19 vaccines to be copied without their permission through recourse to compulsory licensing “would undermine innovation and raise the risk of unsafe viruses.”[12](https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines#_ednref12)

The reaction of most nongovernmental health organizations and other global advocacy groups to these arguments is summed up in the Access Campaign’s response: “Since the start of the pandemic, pharmaceutical companies have continued with their ‘business‐​as‐​usual’ approaches either by maintaining rigid control over their proprietary IP rights or by pursuing secretive and monopolistic commercial deals and excluding countries affected by COVID-19.”[13](https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines#_ednref13)

What we have not heard in the waiver debate is any clear explanation from waiver advocates of why they believe that the right to compulsory licensing that they already possess will prove insufficient to ensuring access to COVID-19 vaccines.

In requesting a broad waiver of IP rights to COVID-19 vaccines, India and South Africa maintained that “many countries especially developing countries may face institutional and legal difficulties when using flexibilities available” under existing WTO rules. They also noted that a “particular concern for countries with insufficient or no manufacturing capacity” is that the 2017 amendment that permits countries that produce generic medicines under compulsory license to export all of those medicines to least‐​developed countries that lack their own manufacturing capabilities will lead to a “cumbersome and lengthy process.”[14](https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines#_ednref14)

India and South Africa did not offer any further explanation or any evidence to support these assertions. In an effort at an explanation, two Canadian university professors contended, “The TRIPS flexibilities are important policies but they are not perfect. Rules allowing compulsory licensing apply only on a case‐​by‐​case and product‐​by‐​product basis. This slows down the ability of countries to scale up production of needed COVID-19 products.”[15](https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines#_ednref15) But this is advocacy, not evidence. At the time, this point was purely prospective; it was a prejudgment before any COVID-19 vaccine had been given final approval or reached the market.

Before such a sweeping waiver of IP rights is taken up, it should first be demonstrated that the option of compulsory licensing and other flexibilities under the current trade rules will not suffice. At this point, the developed countries that have opposed the waiver are correct. There is no evidence of the need for such a waiver. Action by the WTO should be contemplated only if, and when, the current flexibilities in WTO rules prove to be inadequate. Should that happen, any such action should be no broader than necessary to address the global medical need.

At the heart of this emerging trade debate is a belief by many people worldwide that all medicines should be “global public goods.” There is little room in such a belief for consideration of any rights to IP. As one group of United Nations human rights experts expressed: “There is no room for … profitability in decision‐​making about access to vaccines, essential tests and treatments, and all other medical goods, services and supplies that are at the heart of the right to the highest attainable standard of health for all.”[16](https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines#_ednref16)

This view is myopic. **Subordinating IP rights temporarily** to pressing public needs during a pandemic or other global health emergency is one thing. Eliminating any consideration of “profitability” in all policymaking relating to “access to vaccines, essential tests and treatments, and all other medical goods, services and supplies” is quite another.[17](https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines#_ednref17) To be sure, there is a superficial moral appeal in such a view. But does this moral appeal hold up if such a “human rights” approach does not result in meeting those urgent public needs?

With the belief that medicines should be “public goods,” there is literally no support in some quarters for the application of the WTO TRIPS Agreement to IP rights in medicines. Any protection of the IP rights in such goods is viewed as a violation of human rights and of the overall public interest. This view, though, does not reflect the practical reality of a world in which many medicines would simply not exist if it were not for the existence of IP rights and the protections they are afforded.

Technically, IP rights are exceptions to free trade. A long‐​standing general discussion in the WTO has been about when these exceptions to free trade should be allowed and how far they should be extended. The continuing debate over IP rights in medicines is only the most emotional part of this overall conversation. Because developed countries have, historically, been the principal sources of IP rights, this lengthy WTO dispute has largely been between developed countries trying to uphold IP rights and developing countries trying to limit them. The debate over the discovery and the distribution of vaccines for COVID-19 is but the latest global occasion for this ongoing discussion.

The primary justification for granting and protecting IP rights is that they are incentives for innovation, which is the main source for long‐​term economic growth and enhancements in the quality of human life. IP rights spark innovation by “enabling innovators to capture enough of the benefits of their own innovative activity to justify taking considerable risks.”[18](https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines#_ednref18) The knowledge from innovations inspired by IP rights spills over to inspire other innovations. The protection of IP rights promotes the diffusion, domestically and internationally, of innovative technologies and new know‐​how. Historically, the principal factors of production have been land, labor, and capital. In the new pandemic world, perhaps an even more vital factor is the creation of knowledge, which adds enormously to “the wealth of nations.” Digital and other economic growth in the 21st century is increasingly ideas‐​based and knowledge intensive. Without IP rights as incentives, there would be less new knowledge and thus less innovation.

## 2

#### Drug innovation is high—Prefer our study it’s analyzes the past decade and is from one of the most trusted leaders in innovation information, Clarivate 9-15

[[Clarivate Plc](https://c212.net/c/link/?t=0&l=en&o=3290353-1&h=1934425780&u=https%3A%2F%2Fc212.net%2Fc%2Flink%2F%3Ft%3D0%26l%3Den%26o%3D2991820-1%26h%3D1150240617%26u%3Dhttp%253A%252F%252Fwww.clarivate.com%252F%26a%3DClarivate%2BPlc&a=Clarivate+Plc), (NYSE:[CLVT](https://www.prnewswire.com/news-releases/2021-centre-for-medicines-research-cmr-pharmaceutical-rd-factbook-from-clarivate-finds-drug-approvals-at-a-10-year-high-despite-the-challenges-of-covid-19-301376948.html#financial-modal)), a global leader in providing trusted information and insights to accelerate the pace of innovation, today announced the release of the [2021 Centre for Medicines Research (CMR) International Pharmaceutical R&D Factbook](https://c212.net/c/link/?t=0&l=en&o=3290353-1&h=2854804820&u=https%3A%2F%2Fclarivate.com%2Finnovation-exchange%2Fsolution%2Fcmr-international-pharmaceutical-rd-factbook%2F%3Fcampaignname%3DCMR_RD_Factbook_Ecommerce_LS_Global_2021%26campaignid%3D7014N000001YTVM%26utm_campaign%3DCMR_RD_Factbook_Ecommerce_LS_Global_2021%26utm_source%3Dearned_coverage%26utm_medium%3Dpress&a=2021+Centre+for+Medicines+Research%C2%A0(CMR)+International+Pharmaceutical+R%26D+Factbook)., 9-15-2021, "2021 Centre for Medicines Research (CMR) Pharmaceutical R&amp;D Factbook from Clarivate Finds Drug Approvals at a 10-year High Despite the Challenges of COVID-19", No Publication, https://www.prnewswire.com/news-releases/2021-centre-for-medicines-research-cmr-pharmaceutical-rd-factbook-from-clarivate-finds-drug-approvals-at-a-10-year-high-despite-the-challenges-of-covid-19-301376948.html, date accessed 9-15-2021] //Lex AT

COVID impact1 Amid a global pandemic as the world has shone a spotlight on the industry's COVID-19 vaccine and therapeutic development race, biopharma companies have been anxious to see how COVID-19 could impact R&D. From the CMR Factbook we can infer that there has been no major impact from COVID-19 on the R&D pipeline thus far. While it typically takes a drug two to three years to transition through a clinical phase, the longer-term impact remains to be seen. 2020 saw a 10-year high for NME launches indicating that COVID-19 did not negatively impact drug R&D. There were 59 NMEs launched in 2020 as compared to 31 in 2011 and 46 in 2019. The pandemic did not impact drug development times as they have stayed relatively constant from 2019 to 2020 at 10.5 and 10.4 years respectively. Approval times for FDA, EMA, and PMDA remained stable despite the pandemic: The FDA took on average 244 days in 2020 as compared to 243 in 2019. The EMA took on average 426 days in 2020 as compared to 423 in 2019. The PDMA took on average 313 days in 2020 as compared to 304 in 2019. Industry innovation2 In addition to pandemic-related impacts, now more than ever, biopharma companies are focused on truly innovative and differentiated therapies. According to 2020 FDA approvals, 58% were for rare indications while 68% were granted at least one regulatory designation: breakthrough, fast-track, accelerated, or priority. Both these points put together suggest that biopharma is increasingly focusing on innovative and differentiated therapies. TNF alpha ligand was the most popular target in 2020 with 69 companies actively researching the area. 3 These innovative therapies are mainly being researched by emerging biopharma companies rather than top 30 innovators. Of the 69 companies researching the TNF alpha ligand, only three of them are top 30 innovators. 4

#### IP protections encourage innovation in pandemics. McDole and Ezell 21

Jaci Mcdole and Stephen Ezell; McDole is a senior policy analyst covering intellectual property (IP) and innovation policy at the Information Technology and Innovation Foundation (ITIF). Ezell is vice president, global innovation policy, at the Information Technology and Innovation Foundation (ITIF). He focuses on science and technology policy, international competitiveness, trade, manufacturing, and services issues.; 4‑29‑2021; ”Ten Ways IP Has Enabled Innovations That Have Helped Sustain the World Through the Pandemic”; https://itif.org/publications/2021/04/29/ten‑ways‑ip‑ has‑enabled‑innovations‑have‑helped‑sustain‑world‑through, ITIF, accessed 7‑29‑2021; JPark

In the fight against COVID‑19, there are two main types of diagnostic tests: molecu‑ lar and antigen.94 According to the U.S. FDA, molecular tests detect an active virus’s genetic material and provide more accurate results, while antigen tests provide faster re‑ sults and detect specific proteins from an active virus.95 As of December 21, 2020, there were 469 COVID‑19 diagnostic innovations in various stages of development around the world, two of which were fully‑approved for general use and 203 were authorized for emergency use.96 One such innovation was developed by LumiraDx, a point‑of‑care diagnostic and health care information technology company based in the United King‑ dom. The LumiraDx SARS‑CoV‑2 Ag Test is an antigen diagnostic test used in conjunc‑ tion with the LumiraDx Instrument and Platform to quickly provide highly accurate results.97 Like most COVID‑19 diagnostic tests, the LumiraDX SARS‑CoV‑2 Ag Test starts with collecting a specimen using a nasal swab. In prepping the specimen, the test uses microfluidic immunofluorescence to determine whether a COVID‑19 nucleocapsid protein antigen is present in the specimen. A test strip with the prepped specimen is inserted into the LumiraDx Instrument, and results are reported to the LumiraDx Plat‑ form within 12 minutes.98 In clinical trials, within the first 12 days of symptom onset, the tests produced the same results as molecular tests 97.6 percent of the time for positive results and 96.6 percent of the time for negative results.99 For tests conducted within the first three days of symptom onset, the results were 100 percent aligned.100 Subsequent independent tests have shown similar results.101 In August 2020, the FDA granted the company EUA for the LumiraDx SARS‑CoV‑2 Ag Test, and as of January 21, 2021, the test is available in more than 30 countries including Japan, Brazil, and Switzerland.102 In November 2020, LumiraDx partnered with numerous organizations—including the Africa Centres for Disease Control and Prevention, the Bill and Melinda Gates Founda‑ tion, and the COVID‑19 Therapeutics Accelerator—to provide 55 African Union mem‑ ber states with portable diagnostic instruments and related COVID‑19 antigen tests. For innovative companies such as LumiraDx, the importance of IP cannot be understated. As Sir John Bell and his colleagues stated, the life‑sciences sector fundamentally survives on IP.103 LumiraDx holds 22 patents associated with the company’s platform, diagnos‑ tic assays, and smart connectivity, covering nine different jurisdictions. According to the 2020 U.S. Chamber International IP Index, the United Kingdom ranks second out of 53 countries in terms of IP system effectiveness.104 Key factors weakening the country’s IP, as noted in the U.S. Chamber’s report, include uncertainties surrounding Brexit and the United Kingdom’s adherence to European Commission policies concerning patent term restoration for biopharmaceuticals. The GII 2020 ranks the United Kingdom third in Europe and fourth overall worldwide in innovation policies. Also, the GII 2020 ranks the United Kingdom sixth out of 49 high‑income economies for quality of innovation. Given the country’s sustained success in innovation, and for the sake of patients and innovators alike, the United Kingdom must ensure that robust IP systems remain and improve throughout the future.105 Due to government restrictions and market access barriers, UK patients often lack access to the latest medical innovations.106 These poli‑ cies and restrictions must be reviewed and addressed in a more market‑friendly man‑ ner moving forward. As the country settles into this new era, policymakers should also ensure strong IP provisions are included in all trade agreements.107 Continued consis‑ tency between the UK and European Union systems will ensure certainty and continuity for innovative businesses such as LumiraDx. UK policymakers should also adopt and implement the proposed policy changes set forth in Sir John Bell’s 2017 Life Sciences Industrial Strategy report.108 If policymakers in the United Kingdom maintain provid‑ ing robust IP systems for their innovators, they will continue to be among the world’s innovation leaders. When these provisions are in place and implemented properly, citi‑ zens of the United Kingdom—and the world—will continue to benefit from innovations such as the LumiraDx SARS‑CoV‑2 Ag Test.

#### Pharma innovation solves disease – that prevents extinction

Engelhardt 8 – PhD, MD, Professor of Philosophy @ Rice (Hugo, “Innovation and the Pharmaceutical Industry: Critical Reflections on the Virtues of Profit,” EBrary)

Many are suspicious of, or indeed jealous of, the good fortune of others. Even when profit is gained in the market without fraud and with the consent of all buying and selling goods and services, there is a sense on the part of some that something is wrong if considerable profit is secured. There is even a sense that good fortune in the market, especially if it is very good fortune, is unfair. One might think of such rhetorically disparaging terms as "wind-fall profits". There is also a suspicion of the pursuit of profit because it is often embraced not just because of the material benefits it sought, but because of the hierarchical satisfaction of being more affluent than others. The pursuit of profit in the pharmaceutical and medical-device industries is tor many in particular morally dubious because it is acquired from those who have the bad fortune to be diseased or disabled. Although the suspicion of profit is not well-founded, this suspicion is a major moral and public-policy challenge. Profit in the market for the pharmaceutical and medical-device industries is to be celebrated. This is the case, in that if one is of the view (1) that the presence of additional resources for research and development spurs innovation in the development of pharmaceuticals and med-ical devices (i.e., if one is of the view that the allure of profit is one of the most effective ways not only to acquire resources but productively to direct human energies in their use), (2) that given the limits of altruism and of the willingness of persons to be taxed, the possibility of profits is necessary to secure such resources, (3) that the allure of profits also tends to enhance the creative use of available resources in the pursuit of phar-maceutical and medical-device innovation, and (4) if one judges it to be the case that such innovation is both necessary to maintain the human species in an ever-changing and always dangerous environment in which new microbial and other threats may at any time emerge to threaten human well-being, if not survival (i.e., that such innovation is necessary to prevent increases in morbidity and mortality risks), as well as (5) in order generally to decrease morbidity and mortality risks in the future, it then follows (6) that one should be concerned regarding any policies that decrease the amount of resources and energies available to encourage such innovation. One should indeed be of the view that the possibilities for profit, all things being equal, should be highest in the pharmaceutical and medical-device industries. Yet, there is a suspicion regarding the pursuit of profit in medicine and especially in the pharmaceutical and medical-device industries.

## 3

#### US dominates biotech now but reducing IPP cedes control to China, Paulsen 7-9

Erik Paulsen, 7-9-2021, "ERIK PAULSEN: We can save the world with our vaccines — without surrendering our IP to China," Bakersfield Californian, <https://www.bakersfield.com/opinion/erik-paulsen-we-can-save-the-world-with-our-vaccines-without-surrendering-our-ip-to/article_b0b87692-df61-11eb-9a13-d7fa02eefaee.html> AT

The Biden administration gave Beijing a gift when it endorsed a petition before the World Trade Organization to force the American developers of COVID-19 vaccines and therapeutics to relinquish their intellectual property rights to these medicines. The Chinese government seeks to take over in biotech, a sector where U.S. innovators lead. Biotech is included in its "Made in China 2025" plan, which lists 10 sectors that China aims to dominate. The government intends to force anyone doing business in China in those spheres to hand over know-how. Surrendering IP protections on biomedical technology has dire consequences. Foremost, it guts the foundation of biomedical innovation, which takes huge investments spanning many years to bear fruit. IP protections assure innovators that they can recover those investments and make a profit. Losing IP protection would have a chilling effect on investments in the sector. Equally injurious to America, the IP waiver would allow China to become a biotech powerhouse by piggybacking on American innovation. A waiver on IP for COVID-19 vaccines would accelerate the timeline for "Made in China 2025." The mRNA technology which undergirds the Pfizer-BioNTech and Moderna vaccines has uses beyond this pandemic. It has the potential to take on cancers and other diseases. With the waiver, China and others will be emboldened to use the once-proprietary mRNA know-how for broader research and applications. Is this in America's interest? Mark Cohen, an expert on Chinese IP theft, recently told the Washington Post that the waiver would deliver "a competitive advantage to countries that are increasingly viewed as our adversaries, at taxpayer expense." Beyond the damage that an mRNA giveaway will inflict on US R&D investments, the waiver sends a signal that America could agree to force American innovators to part with trade secrets every time there's a global crisis. That attitude will arrest biopharmaceutical innovation. Small biotech firms spearhead 70% of the R&D pipeline, relying heavily on private investors to fund that work. If investors know that innovators may have to give away their discoveries in a global crisis, they'll deploy their money elsewhere. That’ll make it even harder to draw the R&D investments needed to address infectious diseases, including drug-resistant infections and viruses. America is benefiting greatly from the early access to COVID-19 treatments and vaccines, saving lives and speeding economic recovery. Preserving U.S. leadership in biomedical innovation includes preserving the incentives that helped make it the world’s leader. A final downside of the waiver is the ability for American firms to find a cure for the next pandemic. Among the greatest threats is bacteria resistant to our current arsenal of antibiotics that becomes a pandemic-inducing superbug. Already, the market for new antimicrobials is broken. Only a handful of biotechs have them in development, and many have gone bankrupt trying to commercialize one. "A lot of people have rightly said we need to start thinking about preparing for the next pandemic now," noted Craig Garthwaite, a healthcare-business professor at Northwestern University. "Suspending IP for vaccine manufacturers would send exactly the wrong signal for the future." For the sake of patients everywhere, American IP rights must stay protected. It's the only way to keep China at bay and American innovators at work.

#### Biotech leadership key to future military primacy.

Moore 21 [(Scott Moore is a political scientist and administrator at the University of Pennsylvania and the author of a forthcoming book, “How China Shapes the Future,” on China’s role in public goods and emerging technologies.) 8-8-2021, "In Biotech, the Industry of the Future, the U.S. Is Way Ahead of China," Lawfare, https://www.lawfareblog.com/biotech-industry-future-us-way-ahead-china]//Lex AKu

A [continuing refrain](https://phys.org/news/2020-10-america-edge-peril.html) from Washington in recent years has been that the United States is falling behind China in the development of critical emerging technologies. In some fields, this may be true. But not in biotechnology. To be sure, China’s biotech sector is growing at a torrid pace, and some of its firms are becoming leaders in [certain areas](https://www.brookings.edu/wp-content/uploads/2020/04/FP_20200427_china_biotechnology_moore.pdf), such as cancer treatment. Yet the U.S. retains a dominant position in research, development and commercialization, accounting for [almost half](https://itif.org/publications/2018/03/26/how-ensure-americas-life-sciences-sector-remains-globally-competitive) of all biotech patents filed from 1999 to 2013. The triumph of its biotechnology industry during the coronavirus pandemic, producing two highly effective vaccines using an entirely new approach based on [messenger RNA](https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/mrna.html), and in record time, shows that the U.S.’s competitive edge in biotechnology remains largely intact. And that has important implications as Washington gears up for a sustained period of geopolitical competition with Beijing. Biotech is such a critical area for technological competition between the U.S. and China because it is transforming fields from medicine to military power. The great advances of the 19th century, like chemical fertilizers, resulted from mastering chemistry. In the 20th century, mastery of physics led to nuclear energy—and, more ominously, nuclear weapons. In the 21st century, biology offers a similar mix of peril and promise. This was illustrated dramatically by the award of the 2020 Nobel Prize for the discovery of an enzyme system known as CRISPR-Cas9, which allows an organism’s genomes to be edited with high precision. It is a transformational breakthrough. But while CRISPR shows great promise in the development of [new cures](https://www.nature.com/articles/d41586-020-03476-x) for long-untreatable diseases, it could also lead to a whole new generation of [deadly bioweapons](https://foreignpolicy.com/2019/11/08/cloning-crispr-he-jiankui-china-biotech-boom-could-transform-lives-destroy-them/). That’s a prospect that increasingly alarms U.S. intelligence officials. In 2016, then-Director of National Intelligence James Clapper [warned Congress](https://www.technologyreview.com/s/600774/top-us-intelligence-official-calls-gene-editing-a-wmd-threat/) that “[r]esearch in genome editing conducted by countries with different regulatory or ethical standards than those of western countries probably increases the risk of the creation of potentially harmful biological agents or products.” Although Clapper didn’t name specific countries, it soon became clear that he was referring mainly to China. Four years later, his successor, John Ratcliffe, issued a far more [pointed warning](https://www.wsj.com/articles/china-is-national-security-threat-no-1-11607019599) that “China has even conducted human testing on members of the People’s Liberation Army in hope of developing soldiers with biologically enhanced capabilities. There are no ethical boundaries to Beijing’s pursuit of power.” Such capabilities are almost certainly only speculative—but they underscore why biotech leadership is so important for national security as well as economic competitiveness. Beijing has long envied the United States’s dominant position in biotechnology and spent heavily to overtake it. Biotech has been a priority sector for state investment since the 1980s, and by [one estimate](https://www.brookings.edu/wp-content/uploads/2020/04/FP_20200427_china_biotechnology_moore.pdf) Beijing had poured some $100 billion into the sector by 2018. Nowhere did it lavish more attention or invest more of its propaganda power than in developing a coronavirus vaccine. State media have spent months [crowing](https://www.globaltimes.cn/content/1190615.shtml) that “China is working around the clock for breakthroughs in COVID-19 vaccines.” Yet despite this push, China’s vaccine program quickly took on a Potemkin air. In February 2020, barely two months after the onset of the pandemic and after a supposedly crash vaccine effort, a military doctor stood in front of a Chinese flag to receive what was billed as an experimental vaccine dose but was widely suspected to be a [staged photo op](https://www.sciencemag.org/news/2020/11/global-push-covid-19-vaccines-china-aims-win-friends-and-cut-deals). Now, having [spent months](https://www.nytimes.com/2021/01/13/business/chinese-vaccine-brazil-sinovac.html) talking up its two primary vaccine candidates to developing countries like Brazil and Indonesia, both of which have entered into purchase agreements with Chinese biotech firms, Chinese officials face [severe mistrust](https://www.nytimes.com/2021/01/13/business/chinese-vaccine-brazil-sinovac.html) among their nation’s overseas partners. For China’s leaders, the disappointing returns on their big bet on biotechnology look likely to cause them more headaches at home as well as abroad—there are [already signs](https://www.sciencemag.org/news/2020/11/global-push-covid-19-vaccines-china-aims-win-friends-and-cut-deals) that affluent Chinese place more trust in foreign-developed coronavirus vaccines than the homegrown ones produced at such great expense. For U.S. officials, though, China’s relative underperformance in vaccine development presents an opportunity to reassert the United States’s leadership in biotechnology and public health and bolster the nation’s depleted soft power in the process. The Biden administration has already signaled it will reengage in multilateral bodies such as the World Health Organization. Yet the U.S. shouldn’t stop there. Washington should begin thinking now about how to emulate the success of the President’s Emergency Plan for AIDS Relief (PEPFAR)—which, though imperfect, is widely regarded as one of the most successful single public health interventions in history—to address growing disparities in access to coronavirus vaccines between countries. At the moment, vaccine supplies are controlled largely by rich countries, creating the risk of moral and public health failure if the gap persists. While COVID-19, the respiratory disease caused by the novel coronavirus, differs in many respects from AIDS, PEPFAR combined research, prevention, and access to therapeutics. Developing a comparable institutional structure to close the coronavirus vaccine access gap is the right thing to do—but it would also go a long way to restoring America’s battered global reputation. At the same time, the United States can’t afford to rest on its laurels in biotechnology, or any other field. Aside from China, other nations like Singapore and Israel have also invested heavily to develop their biotechnology sectors, with Israel in particular giving rise to a thriving biotech industry. U.S. public investment in basic scientific research and development has meanwhile [been on the decline](https://www.wsj.com/articles/how-the-u-s-surrendered-to-china-on-scientific-research-11555666200) for decades, and there are worrying signs that America’s once world-beating innovation ecosystem is less productive, and less entrepreneurial, than it once was. Despite strengths in translational research, moreover, the frontiers of biology increasingly sit at the [intersection with other disciplines](https://www.startus-insights.com/innovators-guide/biotech-innovation-map-reveals-emerging-technologies-startups/) like computer science, meaning that funding agencies, universities and other organizations need to break down disciplinary silos. Boosting support for biotechnology research, while reforming how that money is used, will go a long way toward shoring up the United States’s leading position in the global biotech sector. The U.S. biotechnology sector also faces other threats, not least growing espionage and intellectual property theft by foreign actors, especially those linked to China. Several high-profile cases brought by the U.S. Department of Justice’s China Initiative have involved biotechnology researchers, and American biotech firms have been [top targets](https://www.jdsupra.com/legalnews/chinese-and-russian-hackers-targeting-78355/) for cyber theft and intrusion. Sustained outreach to researchers and research institutions is critical to preventing such theft. But efforts to clamp down on the threats posed by espionage and intellectual property theft can easily go too far and must preserve the researcher mobility and data-sharing that is essential to doing cutting-edge science. Beyond its shores, the United States should work with its partners and allies to enhance export controls on dual-use biotechnology—used for both peaceful and military gain—especially DNA templates. Many forms of genetic material and synthetic biology products are [already subject](https://www.bis.doc.gov/index.php/documents/regulations-docs/2332-category-1-materials-chemicals-microorganisms-and-toxins-4/file) to U.S. export controls, but gaps remain, and screening for genetic sequence orders relies primarily on voluntary regulation by biotech firms. Better coordinating export controls among major economies and U.S. allies can dramatically reduce the risk of sophisticated bioweapons development in the decades to come.

#### American primacy solves every threat – collapse causes emboldenment and miscalc

Brands 18, Hal. American grand strategy in the age of Trump. Brookings Institution Press, 2018. “Chapter 6: Does America Have Enough Hard Power?” (Henry A. Kissinger Distinguished Professor of Global Affairs at the Johns Hopkins University School of Advanced International Studies, Senior Fellow at the Center for Strategic and Budgetary Assessments and the Foreign Policy Research Institute, Ph.D. in history from Yale University)//Elmer

Much contemporary commentary favors the first option—reducing commitments—and denounces the third as financially ruinous and perhaps impossible.5 Yet significantly expanding American capabilities would not be nearly as economically onerous as it may seem. Compared to the alternatives, in fact, this approach represents the best option for sustaining American primacy and preventing a slide into strategic bankruptcy that will eventually be punished. Since World War II, the United States has had a military second to none. Since the Cold War, America has committed to having overwhelming military primacy. The idea, as George W. Bush declared in 2002, that America must possess “strengths beyond challenge” has featured in every major U.S. strategy document for a quarter century; it has also been reflected in concrete terms.6 From the early 1990s, for example, the United States consistently accounted for around 35 to 45 percent of world defense spending and maintained peerless global power-projection capabilities.7 Perhaps more important, U.S. primacy was also unrivaled in key overseas strategic regions—Europe, East Asia, the Middle East. From thrashing Saddam Hussein’s million-man Iraqi military during Operation Desert Storm, to deploying—with impunity—two carrier strike groups off Taiwan during the China-Taiwan crisis of 1995– 96, Washington has been able to project military power superior to anything a regional rival could employ even on its own geopolitical doorstep. This military dominance has constituted the hard-power backbone of an ambitious global strategy. After the Cold War, U.S. policymakers committed to averting a return to the unstable multipolarity of earlier eras, and to perpetuating the more favorable unipolar order. They committed to building on the successes of the postwar era by further advancing liberal political values and an open international economy, and to suppressing international scourges such as rogue states, nuclear proliferation, and catastrophic terrorism. And because they recognized that military force remained the ultima ratio regum, they understood the centrality of military preponderance. Washington would need the military power necessary to underwrite worldwide alliance commitments. It would have to preserve substantial overmatch versus any potential great-power rival. It must be able to answer the sharpest challenges to the international system, such as Saddam’s invasion of Kuwait in 1990 or jihadist extremism after 9/11. Finally, because prevailing global norms generally reflect hard-power realities, America would need the superiority to assure that its own values remained ascendant. It was impolitic to say that U.S. strategy and the international order required “strengths beyond challenge,” but it was not at all inaccurate. American primacy, moreover, was eminently affordable. At the height of the Cold War, the United States spent over 12 percent of GDP on defense. Since the mid-1990s, the number has usually been between 3 and 4 percent.8 In a historically favorable international environment, Washington could enjoy primacy—and its geopolitical fruits—on the cheap. Yet U.S. strategy also heeded, at least until recently, the fact that there was a limit to how cheaply that primacy could be had. The American military did shrink significantly during the 1990s, but U.S. officials understood that if Washington cut back too far, its primacy would erode to a point where it ceased to deliver its geopolitical benefits. Alliances would lose credibility; the stability of key regions would be eroded; rivals would be emboldened; international crises would go unaddressed. American primacy was thus like a reasonably priced insurance policy. It required nontrivial expenditures, but protected against far costlier outcomes.9 Washington paid its insurance premiums for two decades after the Cold War. But more recently American primacy and strategic solvency have been imperiled. THE DARKENING HORIZON For most of the post–Cold War era, the international system was— by historical standards—remarkably benign. Dangers existed, and as the terrorist attacks of September 11, 2001, demonstrated, they could manifest with horrific effect. But for two decades after the Soviet collapse, the world was characterized by remarkably low levels of great-power competition, high levels of security in key theaters such as Europe and East Asia, and the comparative weakness of those “rogue” actors—Iran, Iraq, North Korea, al-Qaeda—who most aggressively challenged American power. During the 1990s, some observers even spoke of a “strategic pause,” the idea being that the end of the Cold War had afforded the United States a respite from normal levels of geopolitical danger and competition. Now, however, the strategic horizon is darkening, due to four factors. First, great-power military competition is back. The world’s two leading authoritarian powers—China and Russia—are seeking regional hegemony, contesting global norms such as nonaggression and freedom of navigation, and developing the military punch to underwrite these ambitions. Notwithstanding severe economic and demographic problems, Russia has conducted a major military modernization emphasizing nuclear weapons, high-end conventional capabilities, and rapid-deployment and special operations forces— and utilized many of these capabilities in conflicts in Ukraine and Syria.10 China, meanwhile, has carried out a buildup of historic proportions, with constant-dollar defense outlays rising from US$26 billion in 1995 to US$226 billion in 2016.11 Ominously, these expenditures have funded development of power-projection and antiaccess/area denial (A2/AD) tools necessary to threaten China’s neighbors and complicate U.S. intervention on their behalf. Washington has grown accustomed to having a generational military lead; Russian and Chinese modernization efforts are now creating a far more competitive environment. Second, the international outlaws are no longer so weak. North Korea’s conventional forces have atrophied, but it has amassed a growing nuclear arsenal and is developing an intercontinental delivery capability that will soon allow it to threaten not just America’s regional allies but also the continental United States.12 Iran remains a nuclear threshold state, one that continues to develop ballistic missiles and A2/AD capabilities while employing sectarian and proxy forces across the Middle East. The Islamic State, for its part, is headed for defeat, but has displayed military capabilities unprecedented for any terrorist group, and shown that counterterrorism will continue to place significant operational demands on U.S. forces whether in this context or in others. Rogue actors have long preoccupied American planners, but the rogues are now more capable than at any time in decades. Third, the democratization of technology has allowed more actors to contest American superiority in dangerous ways. The spread of antisatellite and cyberwarfare capabilities; the proliferation of man-portable air defense systems and ballistic missiles; the increasing availability of key elements of the precision-strike complex— these phenomena have had a military leveling effect by giving weaker actors capabilities which were formerly unique to technologically advanced states. As such technologies “proliferate worldwide,” Air Force Chief of Staff General David Goldfein commented in 2016, “the technology and capability gaps between America and our adversaries are closing dangerously fast.”13 Indeed, as these capabilities spread, fourth-generation systems (such as F-15s and F-16s) may provide decreasing utility against even non-great-power competitors, and far more fifth-generation capabilities may be needed to perpetuate American overmatch. Finally, the number of challenges has multiplied. During the 1990s and early 2000s, Washington faced rogue states and jihadist extremism—but not intense great-power rivalry. America faced conflicts in the Middle East—but East Asia and Europe were comparatively secure. Now, the old threats still exist—but the more permissive conditions have vanished. The United States confronts rogue states, lethal jihadist organizations, and great-power competition; there are severe challenges in all three Eurasian theaters. “I don’t recall a time when we have been confronted with a more diverse array of threats, whether it’s the nation state threats posed by Russia and China and particularly their substantial nuclear capabilities, or non-nation states of the likes of ISIL, Al Qaida, etc.,” Director of National Intelligence James Clapper commented in 2016. Trends in the strategic landscape constituted a veritable “litany of doom.”14 The United States thus faces not just more significant, but also more numerous, challenges to its military dominance than it has for at least a quarter century.

## 4

### Permissibility/Presumption

#### Permissibility and presumption Negate,

#### 1] Text – Ought is defined as expressing obligation[[1]](#footnote-1) which means absent a proactive obligation you vote neg since the aff can’t prove an obligation. O/W since text is the only thing we have access to prior to the round.

#### 2] Safety – It’s ethically safer to presume the squo since we know what the squo is but we can’t know whether the aff will be good or not if ethics are incoherent.

#### 3] Real world – Policymakers don’t pass policies they aren’t sure about, they shelve them for later.

### Framing

#### The standard is consistency with determinism.

#### 1] Biology – Every organism has controlled responses to stimuli because of its inherited genes and environment. That applies to humans, i.e. when we cut onions we cry.

#### 2] Nature – the universe is infinite, that justifies determinism since any individual act is too small to alter the fate of the universe, Horne 1

Herman H. Horne, 1912, “The Arguments for Determinism”, Excerpt from Free Will and Human Responsibility: A Philosophical Argument, https://web.csulb.edu/~cwallis/100/articles/arguments\_for\_determinism.html

This argument has been somewhat anticipated in the preceding paragraph. It is but a generalization of all the four preceding arguments. A philosophy of nature is a general theory explanatory of all the occurrences of nature. Now the ideal of scientific explanation in physics, chemistry, biology, physiology, and everywhere is mechanical. Events do not happen because anybody or any will wants them to happen; they happen because they have to happen; they happen because they must. And it is the business of science to find this necessary connection between the occurrences of nature. The universe, by this hypothesis, whole and part, is governed by the action of mechanical law. The reign of law is universal. Man is a very small creature upon a small earth, which is itself a comparatively small planet in one of the smaller solar systems of an indefinitely large number of solar systems which partially fill infinite space. The universe is a physical mechanism in which law rules, and man is but a least part of this universal machine. How then can he do otherwise than he does do? A single free-will act would introduce caprice, whim, chance, into a universe whose actions are so mechanically determined that an omniscient observer of the present could predict infallibly all futurity. . . .

#### 3] Arbitrariness – if determinism is false then you imply that human acts are random since they aren’t based on any previous cause. Ethics can’t be arbitrary because otherwise it wouldn’t guide action since anything is permissible.

#### 4] The best neuroscientific, psychological, and medical evidence agrees, Lavazza 16

Andrea Lavazza, Neuroethics, Centro Universitario Internazionale, Arezzo, Italy, Free Will and Neuroscience: From Explaining Freedom Away to New Ways of Operationalizing and Measuring It, 2016, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4887467/> ///recut from AHS PB

All these experiments seem to indicate that free will is an illusion. Yet, these relevant experiments can be interpreted in many ways. A possible view is that, in some way, determinism can be observed directly within ourselves. This interpretation might lead to the conclusion that free will is just an illusion. In fact, if one considers as a condition of free will the fact that it should be causa sui (i.e., it should be able to consciously start new causal chains), such a condition is incompatible with determinism as it is usually defined. For it, in fact, all events are linked by casual relations in the form of natural laws, which started long before we were born and which we cannot escape. However, determinism has generally been regarded as a metaphysical claim, not refutable by empirical findings. One could properly talk of automatism in the brain, not of determinism, based on the evidence available. (In any case, endorsing indeterminism might lead to consider our behavior as the causal product of choices that every time produce different results, as if we rolled a dice. This doesn’t seem to make us any freer than if determinism were overturned; cf. Levy, 2011). Most importantly, another feature of freedom seems to be a pure illusion, namely the role of consciousness. The experiments considered thus far heavily question the claim that consciousness actually causes voluntary behavior. Neural activation starts the decisional process culminating in the movement, while consciousness “comes after”, when “things are done”. Therefore, consciousness cannot trigger our voluntary decisions. But the role of consciousness in voluntary choices is part of the definition of free will (but the very definition of consciousness is a matter of debate, cf. Chalmers, 1996). Empirical research in psychology also shows that our mind works and makes choices without our conscious control. As proposed by psychologist Wegner (2002, 2003, 2004) and Aarts et al. (2004), we are “built” to have the impression to consciously control our actions or to have the power to freely choose, even though all that is only a cognitive illusion. Many priming experiments show that people act “mechanically” (even when their behavior might appear suited to the environment and even refined). Automatic cognitive processes, of which we aren’t always aware, originate our decisions, and they were only discovered thanks to the most advanced scientific research. Ultimately, consciousness, which should exercise control and assess the reasons for a choice, is thus allegedly causally ineffective: a mere epiphenomenon, to use the terminology of the philosophy of mind. This is what has been called Zombie Challenge, “based on an amazing wealth of findings in recent cognitive science that demonstrate the surprising ways in which our everyday behavior is controlled by automatic processes that unfold in the complete absence of consciousness” (Vierkant et al., 2013).

#### 5] Molecular Physics proves we are just constructs of molecules, Coyne 12

Jerry Coyne, [Professor in the Department of Ecology and Evolution at The [University of Chicago](http://content.usatoday.com/topics/topic/Organizations/Schools/University+of+Chicago)], “Why You Don’t Really Have Free Will,” *USAToday*, January 1st, 2012. Recut from SM

The first is simple: we are biological creatures, collections of molecules that must obey the laws of physics. All the success of science rests on the regularity of those laws, which determine the behavior of every molecule in the universe. Those molecules, of course, also make up your brain — the organ that does the "choosing." And the neurons and molecules in your brain are the product of both your genes and your environment, an environment including the other people we deal with. Memories, for example, are nothing more than structural and chemical changes in your brain cells. Everything that you think, say, or do, must come down to molecules and physics. True "free will," then, would require us to somehow step outside of our brain's structure and modify how it works. Science hasn't shown any way we can do this because "we" are simply constructs of our brain. We can't impose a nebulous "will" on the inputs to our brain that can affect its output of decisions and actions, any more than a programmed computer can somehow reach inside itself and change its program.

### Offense

#### 1] Determinism states obligatory responsibility doesn’t exist because everything is predetermined so the aff can’t prescribe action.

#### 2] The concept of intellectual property is incoherent, you can’t reduce something that doesn’t exist, Risser 10

[Rita Risser, July 2010, "Creative Determinism and the Claim to Intellectual Property on JSTOR", No Publication, https://www.jstor.org/stable/27904152, date accessed 9-12-2021] //Lex AT

3. Determinism and property Generally it is felt that in order for an individual to justifiably claim a work as her own, it must be 'deeply attributable' to her: the individual must be more than the accidental cause of the work, she must be respon sible for it and merit praise or criticism for the work. Many who consider the question of determinism and human action argue that an individual must have some control over her actions in order to be justifiably praised or blamed in this way. However, there is disagreement about whether or not, given causal determinism, an individual can have the right kind of control over her actions so as to justify praise or blame. Some argue that an individual must be the ultimate originator of her actions and works in order to justify praise or blame. She must, as Galen Strawson puts it, be the "ultimate, buck-stopping originator" of her actions for her to be "truly deserving of praise or blame" (Strawson 1986, 26). But it is hard to see how this can obtain if causal determinism is true. There will always be some cause, some prior event, outside the individual that is an external source for her actions. For example, an individual does not decide to bring herself into existence, with all her peculiarities and tastes. This has been determined for her. If [they are] she is not the ultimate originator of her actions, then how can [they] she be said to have control over them, and therefore justifiably praised or blamed for these actions? If Dennett and others are correct, then ultimate, perhaps even appre ciable, control is lacking in the creation of cultural works. If, therefore, individuals are not the ultimate originators of their creative works, but are merely their accidental and proximate cause, then, in what sense may an individual be praised or blamed for these works? And without a basis for praise or blame, then on what basis does an individual claim ownership for a creative work?

1. <https://www.merriam-webster.com/dictionary/ought> [↑](#footnote-ref-1)