## **First off- framing**

## **The standard is maximizing expected well being**

Actor spec—governments must use util because they don’t have intentions and are constantly dealing with tradeoffs—outweighs since different agents have different obligations—takes out calc indicts since they are empirically denied.

Extinction first –

1~ Forecloses future improvement – we can never improve society because our impact is irreversible

2~ Turns suffering – mass death causes suffering because people can’t get access to resources and basic necessities

3~ Objectivity – body count is the most objective way to calculate impacts because comparing suffering is unethical

## 

## **Second off- DA**

#### **Covid-19 has supercharged innovation in the status quo**

**Ramalingam & Prabhu 20** [Ben Ramalingam- Overseas Development Institute, United Kingdom. Jaideep Prabhu University of Cambridge, United Kingdom. “Innovation, development and COVID-19: Challenges, opportunities and ways forward.” OECD. 1 December 2020. Link: <https://www.oecd.org/coronavirus/policy-responses/innovation-development-and-covid-19-challenges-opportunities-and-ways-forward-0c976158/>] JV

Coronavirus (COVID-19) innovation: what is happening? A global perspective At the same time as causing a huge impact on health and livelihoods around the world, COVID-19 has a created fertile breeding ground for novel solutions and approaches (OECD Observatory of Public Sector Innovation, n.d.[2]). The most comprehensive survey of global research and development (R&D) funding commitments for COVID-19, undertaken by the US-based Policy Cures programme, shows that investment in health-related innovation has been unprecedented (Policy Cures, 2020[3]). The scale of innovation resources mobilised globally is remarkable: USD 9 billion in seven months. By comparison, the total global funding disbursed for Ebola R&D between 2014 and 2018 was USD1.9 billion. The nature of the innovation processes that have been deployed is also notable. In the six months since the outbreak began, the US Food and Drug Administration (FDA) has approved almost 100 COVID-19 tests, in contrast to the three months the FDA took to approve the first Ebola test during the 2014 West Africa outbreak. The first COVID-19 vaccine entered into human trials within a record-breaking 69 days of identifying the causative agent of the outbreak[1](https://www.oecd.org/coronavirus/policy-responses/innovation-development-and-covid-19-challenges-opportunities-and-ways-forward-0c976158/#endnotea0z2) – a remarkable achievement, considering that it took 25 months for the first vaccine to reach the human trial stage during the previous global coronavirus outbreak (SARS in 2002–04).

#### **Medical innovation is crucial to prevent pandemics and mitigate economic harms during shut downs**

**Mulligan 21** [Casey B. Mulligan– American economist and author. He is a Professor in Economics at the University of Chicago. “Economic activity and the value of medical innovation during a pandemic” Cambridge University Press. 9 June 2021. Link: <https://www.cambridge.org/core/journals/journal-of-benefit-cost-analysis/article/economic-activity-and-the-value-of-medical-innovation-during-a-pandemic/864F8042F794D4417E64C643999C9280>] JV

Medical innovation can reduce the duration and severity of pandemics. In doing so, innovation reduces the duration and severity of the direct health costs as well as the costs of economic shutdowns intended to mitigate the health costs. As long as it remains a major barrier to medical innovation, regulation will unnecessarily add to the economic and health costs of the current pandemic (Peltzman, 1973; Philipson & Sun, 2008). Innovation is not finished when scientists discover a new medicine, device, or technique and demonstrate its safety. Pandemic medicines and equipment need to be manufactured and distributed on a massive scale. Personnel need to be trained to administer new treatments. These processes can be slowed by regulatory barriers ranging from federal inspections of facilities manufacturing drugs and devices to state occupational licensure. Although not new, disease testing and contact tracing are essential techniques that are scalable in principle, but early in the pandemic were unavailable in the USA in more than small quantities. Regulatory barriers slow both the manufacturing of these devices and techniques as well as the development of more scalable methods for distributing them.

#### **The risks associated with creating new drugs means that patents are key to biopharmaceutical innovation**

**Cockburn & Long 15 [**Iain Cockburn, Richard C. Shipley Professor of Management. Genia Long, senior advisor and part of analysis group. “The importance of patents to innovation: updates cross-industry comparison with biopharmaceuticals.” Taylor & Francis online, Volume 25, Issue 7, 2015. Published online: 30 April 2015. Link: <https://www.tandfonline.com/doi/full/10.1517/13543776.2015.1040762>] JV

Due to distinctive economic characteristics, patents and regulatory exclusivity have long been considered essential to prescription drug development. These characteristics include the costly, lengthy, and risky nature of innovative research and development (R&D) and the much lower investment required for generic drugs. Because of this disparity, without patent protection and regulatory exclusivity, particularly in the USA, innovators would be unlikely to make the substantial investments required to bring new drugs to market. Whereas drug development is global, patent law and regulation are country-specific. In the USA, regulatory exclusivity operates in parallel with patents, defining when generics or biosimilars may not submit abbreviated applications and/or enter the market. Generic imitation may require several million dollars, whereas the cost to bring a single FDA-approved drug to market (including the cost of failed attempts) has been estimated at $1.4 billion in out-of-pocket costs and $2.6 billion including the cost of capital [[1,2]](https://www.tandfonline.com/doi/full/10.1517/13543776.2015.1040762). New drug R&D requires more than a decade, including pre-clinical testing, clinical trials, and US regulatory approval [[1,2]](https://www.tandfonline.com/doi/full/10.1517/13543776.2015.1040762). In comparison, clinical testing is not required for generics; manufacturers need only demonstrate bioequivalence to an already-approved drug. Risk is also high; the vast majority of candidates are eliminated, most before clinical testing. For those that begin clinical testing, the probability of proceeding to approval averages only 12% [[2,3]](https://www.tandfonline.com/doi/full/10.1517/13543776.2015.1040762). Therefore, R&D must be funded by a few successful, on-market medicines [[4]](https://www.tandfonline.com/doi/full/10.1517/13543776.2015.1040762). Generally, in the USA, once patent protection and any 180-day generic exclusivity end, multiple generics launch, and generic share increases rapidly. For all new molecular entities experiencing first generic entry in 2011–12, the average brand’s unit share of molecule sales declined to 16% 12 months after generic entry, versus 44% in 1999–00 [[5]](https://www.tandfonline.com/doi/full/10.1517/13543776.2015.1040762). In 2013, generics represented 86% of all US prescriptions [[6]](https://www.tandfonline.com/doi/full/10.1517/13543776.2015.1040762). In addition to distinctive R&D and market competition economic characteristics, biopharmaceuticals are also distinguished from other industries by a large gap between the statutory patent term (20 years from the effective patent filing date) and the effective patent term (years remaining at launch), even after any patent term restoration and additional regulatory exclusivity (e.g., for pediatric studies). The average time between brand launch and first generic sale for drugs experiencing initial generic entry in 2011–12 was 12.6 years for drugs with sales greater than $100 million (in 2008 dollars) in the year prior to generic entry, and 12.9 years overall [[5]](https://www.tandfonline.com/doi/full/10.1517/13543776.2015.1040762). In contrast, assuming < 3 years for the US Patent and Trademark Office to examine and approve a patent application (overall average of 29 months for FY2013), the remaining duration (assuming 20 years from the effective patent filing date) would be > 17 years in other industries [[7]](https://www.tandfonline.com/doi/full/10.1517/13543776.2015.1040762).

#### **Pharma collapses without strong IP protections**

**Buckland 17** - Danny Buckland (award-winning journalist who writes about health, general features and news, shortlisted for the prestigious Mind Media Awards for his work covering mental health issues), April 26, 2017, “Patents are lifeblood of pharmas”, https://www.raconteur.net/legal/intellectual-property/patents-are-lifeblood-of-pharmas/ WJ

**Pharmaceutical companies are staffed by ranks of attorneys, and the intellectual property (IP) specialist is now a pivotal position in the research and development (R&D) cycle that keeps a company profitable** and new drugs flowing to patients.

**Tighter regulatory frameworks** and even tighter purse strings controlled by healthcare systems **are putting the squeeze on pharma returns and limiting R&D budgets**. Figures from analysts Deloitte in 2016 reported projected return on investment was at a six-year low while development costs had risen by almost a third.

The litany of market changes is vexing for the industry. **The generation of blockbuster drugs, with massive returns**, **has ended,** national healthcare budgets are receding, traditional management methods are being challenged and new players, such as electronics and software companies, are entering the arena.

“**For pharmaceutical companies, the patent system is its lifeblood and it simply wouldn’t survive without it**,” says Simon Wright, a patent attorney with J A Kemp and chairman of the Chartered Institute of Patent Attorneys’ life sciences committee. “**The cost of getting a product to market is high and there is a high failure rate**, so you are not going to get investment unless you can protect your product and innovation. **Quite frankly, it would all collapse without good IP**.”

#### **Pandemics are a non-linear, existential risk---encompasses AND outweighs other threats. Empirically proven by historic epidemics such as the Black Death and Spanish flu**

**Pamlin and Armstrong 15**, Dennis Pamlin, Executive Project Manager Global Risks, Global Challenges Foundation, and Stuart Armstrong, James Martin Research Fellow, Future of Humanity Institute, Oxford Martin School, University of Oxford, February 2015, “Global Challenges: 12 Risks that threaten human civilization: The case for a new risk category,” Global Challenges Foundation, p.30-93, <https://api.globalchallenges.org/static/wp-content/uploads/12-Risks-with-infinite-impact.pdf> //Re DE EK

4 Global A pandemic (from Greek πᾶν, pan, “all”, and δῆμος demos, “people”) is an epidemic of infectious disease that has spread through human populations across a **large region**; for instance **several continents**, or even **worldwide**. Here only worldwide events are included. A widespread endemic disease that is stable in terms of how many people become sick from it is not a pandemic. 260 84 Global Challenges – Twelve risks that threaten human civilisation – The case for a new category of risks 3.1 Current risks 3.1.4.1 Expected impact disaggregation 3.1.4.2 Probability Influenza subtypes266 Infectious diseases have been one of the **greatest causes of mortality in history**. Unlike many other global challenges pandemics have happened recently, as we can see where reasonably good data exist. Plotting historic epidemic fatalities on a log scale reveals that these tend to follow a **power law with a small exponent**: many plagues have been found to follow a power law with exponent 0.26.261 These kinds of power laws are heavy-tailed262 to a significant degree.263 In consequence most of the fatalities are accounted for by the top few events.264 If this law holds for future pandemics as well,265 then the majority of people who will die from epidemics will likely die from the **single largest pandemic**. **Most epidemic fatalities follow a power law, with some extreme events – such as the Black Death and Spanish Flu – being even more deadly.**267 There are other grounds for suspecting that such a highimpact epidemic will have a ***greater probability*** *than* ***usually assumed****.* All the features of an extremely devastating disease **already exist in nature**: essentially **incurable** (Ebola268), nearly always **fatal** (rabies269), **extremely infectious** (common cold270), and **long incubation periods** (HIV271). If a pathogen were to emerge that somehow **combined these features** (and influenza has demonstrated **antigenic shift**, the ability to combine features from different viruses272), its death toll would be extreme. Many relevant features of the world have changed considerably, making past comparisons problematic. The modern world has better sanitation and medical research, as well as national and supra-national institutions dedicated to combating diseases. Private insurers are also interested in modelling pandemic risks.273 Set against this is the fact that **modern transport** and **dense human population** allow infections to spread much more rapidly, and there is the potential for urban slums to serve as breeding grounds for disease.275 Unlike events such as nuclear wars, pandemics would not damage the world’s infrastructure, and initial survivors would likely be resistant to the infection. And there would probably be survivors, if only in isolated locations. Hence the risk of a civilisation collapse would come from the **ripple effect** of the fatalities and the policy responses. These would include **political and agricultural disruption** as well as **economic dislocation** and damage to the world’s **trade network** (including the food trade). **Extinction risk** is only **possible** if the aftermath of the epidemic **fragments and diminishes human society** to the extent that recovery becomes impossible277 before humanity succumbs to **other risks** (such as **climate change** or **further pandemics**). Five important factors in estimating the probabilities and impacts of the challenge: 1. What the true probability distribution for pandemics is, especially at the tail. 2. The capacity of modern international health systems to deal with an extreme pandemic. 3. How fast medical research can proceed in an emergency. 4. How mobility of goods and people, as well as population density, will affect pandemic transmission. 5. Whether humans can develop novel and effective anti-pandemic solutions.

### 

On case

Generic – Util

1. Hijack—only util can account for degrees of wrongness, telling someone their

shirt looks nice when it doesn’t is better than telling a slave owner where a

runaway slave is which means aggregation controls the internal link to your fw

2. Ac collapses to the nC—if each person has infinite value, having more of that

value is a good thing so you have to aggregate

TJFS- util is better A] Ground & Clash – other frameworks decisively flow to one side while any arg has a

weighable util impact

B] Research skills and real world – allows us to cut cards on the most recent events

and use cost benefit analysis – this is proven since most phil cases are analytics and

the contentions are a couple cards.

Kant forces a focus on dense phil which is not accessible

### **AT Bindingness**

#### **1. No impact to bindingness even if a fw isn’t binding that doesn’t disprove the normative goodness of it**

#### **2. Schmagency objection- shift out of our constitutive obligations and be an agent**

### **AT Concedes Reason**

#### **1. Obviously a silly argument – we don’t say reason doesn’t exist at all, just that our rationality if false**

#### **2. Reasoning existing does not mean it’s the highest moral value**

#### **3. Reasoning doesn’t shape everything – if I said “reject Kantian frameworks” which no warrant, that’s still a statement but there’s obviously no reasoning behind it**

#### **1] Practical identity isn’t constitutive of action any more than desires.**

G.A. Cohen 96, [Marxist political philosopher, formerly Visiting Quain Professor of Jurisprudence, University College, London and Chichele Professor of Social and Political Theory, All Souls College, Oxford], “Reason, Humanity, and the Moral Law,” *Sources of Normativity* (1996), 185.

The passage from 1 (which I shall not question) to 3 rests on 2, but I do not see that 2 is true, except in the trivial sense that, **if I treat something as a reason, then it follows that I regard myself as**, identify myself as, **the** sort of **person who is treating that item**, here and now, **as a reason. I do not see that I must consult an independent conception of my identity to determine whether a possible spring of action is to be endorsed or not**, nor even that such endorsement must issue in such a conception, other than in the indicated trivial sense. **When I am thirsty**, and, at a reflective level, **I do not reject my desire to** drink, I have, or I think that I have, **a reason for taking water, but not one that reflects, or commits me to, a (relevantly) normative conception of my identity**. Merely acting on reasons carries no such commitment.

Presumption persmsainblity negate- dont belive conspiracy theories, if there is not reason to do the aff, the aff hasn’t done their job

Consequences dont fail- only have to prove a link chain to one impact- induction is weird but still works the sun rose today no reason that fails-

#### **The inventor’s property rights must be legally enforced through IP protections.**

**Sonderholm 10 discusses** [Jorn Sonderholm (Professor with Specific Responsibilities at Aalborg University, Denmark, PhD in Philosophy from the University of St Andrews, UK, director of the Centre for Philosophy and Public Policy (C3P)), “Ethical Issues Surrounding Intellectual Property Rights”, Philosophy Compass 5/12 (2010): 1107–1115] SG

Traditionally, two distinct lines of thought have been fielded for the suggestion that IPRs are ethically justifiable. **One line of thought appeals to a natural right of an inventor to control the use of her innovation. This is the libertarian defense of IPRs** which has its historical roots in the writings of John Locke (Locke 1690). Robert Nozick has in more modern times been an advocate for this line of thought (Nozick 1974). **The libertarian view endows individuals with a natural right of appropriation.** This is the idea that **any innovator ⁄ worker who mixes her labor with a previously unowned object or natural resource comes to own this object or resource in full and can legitimately deny that other people use ⁄ appropriate this object or resource.** The natural right of appropriation central to libertarianism has an important proviso (famously formulated by Locke) which is an ‘enough and as good’ clause on original appropriation. The proviso states that one can only appropriate unowned resources if one leaves enough and as good for others. Where resources are scarce, one cannot legitimately stake a claim to something by annexing one’s labor to it. Neither can one come to own the scarce resource by enhancing its value. If the resource is necessary for the continued well-being of others, then the fact that x was the one who developed or improved the resource does not give x exclusive rights over it. x’s entitlement to reward for her labor is overridden by the entitlement of others to that which is necessary for their survival. **On the libertarian view, there is no morally relevant difference between, say, a farmer who mixes her labor with the land and thereby come to own the results of this interaction (the timber, the harvest, the fruits, etc.) and a medical researcher who mixes her labor with certain chemicals and thereby come to own the results of the interaction (physical objects and an intellectual idea ⁄ formula for an useful drug).** Provided that the farmer and the medical researcher pay heed to the Lockean proviso, they both come to enjoy a strong property right on the objects that result from their mixing their labor with unowned natural resources. **This natural property right is**, moreover, to be **written into the legal framework and enforced by the proper authorities** (police and courts of law). **Libertarians can therefore see trade agreements such as TRIPS as a legitimate legal enforcement of a pre-existing natural ⁄ moral right.**

#### **Reducing IP protections arbitrarily coerces pharmaceutical firms and it’s not their obligation to solve the AC’s harms.**

**Sonderholm 09** [Jorn Sonderholm (Professor with Specific Responsibilities at Aalborg University, Denmark, PhD in Philosophy from the University of St Andrews, UK, director of the Centre for Philosophy and Public Policy (C3P)), “Paying a high price for low costs: why there should be no legal constraints on the profits that can be made on drugs for tropical diseases”, Journal of Medical Ethics, 2009; 35: 315–319, https://jme.bmj.com/content/medethics/35/5/315.full.pdf?casa\_token=b8TNX5kGB\_wAAAAA:zRKPmCqJ-kr3DVtwY2o0SLrIkohVq871eo2UO6mHs3pxLy\_kODqFnzdfqUI3XUnjnXjWKP0vmQj-] SG

It is, however, difficult to see why these people are supposed to take an economic loss. **By allocating resources into the research and development of a treatment for malaria** (an enterprise that is likely to involve high economic risk), **the people with an economic interest in the company responded to a health crisis that existed independently of them. However, the moment the research has proved successful, a special obligation is laid on these people in the sense that they have to take an economic loss whereas the rest of us** (wealthy individuals, governments of developed and/or developing countries and international organisations) **do not have to incur a similar loss. Such a way of distributing the economic burden related to making the treatment available to those who would benefit from it is unfair in itself.** The unfairness of the proposal becomes even more startling when one considers that, **in addition to legally forcing the producer of the malaria treatment** (or, at a more abstract level, the producer of D) to lower the price on the treatment, **there are at least two other ways of fulfilling the victims of malaria’s right to the treatment being available to them** (or, at a more abstract level, the victims of T’s right to D being available to them). **One solution** consists in **creating a fund that buys the expensive drugs from the producers and thereafter distributes it to those who need it.** The resources of this fund will come from contributions made by individuals, governments, charities and international organisations. **Another solution** consists in **letting the governments of those countries that are affected by tropical diseases pay for the drugs.**

AT Merges: Even his own Merges evidence does not absolutely establish that in a Kantian world that IP protections are bad. In fact if you read his card in the un-underlined portion, Merges says “Because Kant did not explicitly discuss the necessity defense as it per- tains to property rights, any application of his thinking to the case of phar- maceutical patents can only be speculation.” Merges further goes on to say in the same card that this is only the best that he can do given his understanding and that it is not the only plausible reading of Kant’s universal principle.

AT Uszaki: which says that IPs limit use of tangible objects. The argument from the negative is that in the context of IP protections for medications, developing nations don’t even have the capacity to produce these drugs and in fact there would be more inequitable access. Also Kant absolutely prohibited theft, and IPs help hinder theft of ideas.

The underveiw

Neg is the first reactive speech so any abuse is first from aff

rvis and reasoabiltiy 1ar theory-

RVIs are the only way to check back friv theory.

2. Reciprocity – if the [aff/] can win on theory the [neg] should be able to as well

If you read a shell on a relatively insignificant argument then CI is unnecessary for producing a good norm, i.e. we shouldn’t waste an entire round determining what font size my case should be.

2. Counter interps forces a focus on theory which distracts from topic education

A: The affirmative may not claim affirmative framework choice. To clarify, they may not prohibit the neg from reading an alternate framework or force them to concede to the affs.

B: You did this, its an OCI because it proves the act of reading AFC itself is bad

C:

1. Ground: AFC kills neg ground. First, the aff gets to choose the evaluative framework for the round, which means they pick the one with the best ground for aff and the worst for neg. explodes the neg prep burden because now I have to predict every possible subset of offense. Second, AFC means they doesn’t have to justify their framework. Even if they did, under competing interps, we reject their norm because it allows cherry picking. skews neg time because I have to grant 2-3 minutes of the AC, but they can contest anything I say. Ground key to fairness because it dictates what arguments can be made. This outweighs any arguments about aff skew because the fact that aff is skewed in the squo doesn’t matter if they just shift that skew to the neg.
2. Phil Education: AFC prevents phil debate, the act of reading AFC detracts from phil ed because I have to contest it or lose. This is offense-- they shouldn’t have read AFC in the first place. LD debate is a space that allows us to debate phil instead of policies, if we wanted to we would just do policy. Phil ed controls the internal link to education and outweighs because it is a) specific to LD b) key to forming us as a moral person outside of debate which proves its most applicable and c) controls how we view other things i.e. ethics shape our views of constructs like fairness.

**D. Voters:** Vote on fairness. Debate is a competitive activity governed by rules. You can’t evaluate who did better debating if the round is structurally skewed, so fairness is a gateway to substantive debate. Education is a voter, schools fund debate for its education value, and only education has out of round impacts. Drop the debater on neg theory: 1. drop the argument incentivizes abusive affs that bait theory and then collapse to substance by kicking case or extending tricks – means neg always loses. 2.

#### 

#### **On the advantage**

#### **The issue is supply, not patents---tons of barriers that the plan cannot overcome.**

Alex **Tabarrok 21**. Alex Tabarrok is Bartley J. Madden Chair in Economics at the Mercatus Center and a professor of economics at George Mason University. “Patents are Not the Problem!” Marginal Revolution, May 6, 2021, <https://marginalrevolution.com/marginalrevolution/2021/05/ip-is-not-the-constraint.html>, RJP, **DebateDrills**.

**Patents are not the problem.** All of the vaccine manufacturers are trying to increase supply as quickly as possible. Billions of doses are being produced–more than ever before in the history of the world. **Licenses are widely available**. AstraZeneca have licensed their vaccine for production with [manufactures around the world](https://www.astrazeneca.com/what-science-can-do/topics/technologies/pushing-boundaries-to-deliver-covid-19-vaccine-accross-the-globe.html), including in India, Brazil, Mexico, Argentina, China and South Africa. J&J’s vaccine has been licensed for production by multiple firms in the United States as well as with firms in Spain, South Africa and France. Sputnik has been licensed for production by firms in India, China, South Korea, Brazil and pending EMA approval with firms in Germany and France. Sinopharm has been licensed in the UAE, Egypt and Bangladesh. Novavax has licensed its vaccine for production in South Korea, India, and Japan and it is desperate to find other licensees but technology transfer isn’t easy and there are[limited supplies of raw materials](https://endpts.com/as-fears-mount-over-jj-and-astrazeneca-novavax-enters-a-shaky-spotlight/):

Virtually overnight, [Novavax] set up a network of outside manufacturers more ambitious than one outside executive said he’s ever seen, but they struggled at times to **transfer their technology** there amid pandemic travel restrictions. They were kicked out of one factory by the same government that’s bankrolled their effort. Competing with larger competitors, they’ve found themselves short on raw materials as diverse as Chilean tree bark and bioreactor bags. They signed a deal with India’s Serum Institute to produce many of their COVAX doses but now face the realistic chance that even when Serum gets to full capacity — and they are behind — India’s government, dealing with the world’s worst active outbreak, won’t let the shots leave the country.

[**Plastic bags are a bigger bottleneck than patents**](https://www.news18.com/news/opinion/single-use-plastic-bioreactor-bags-to-filters-why-india-needs-them-from-us-for-covid-vaccines-3681092.html)**.** The US embargo on vaccine supplies to India was precisely that the Biden administration used the DPA to prioritize things like bioreactor bags and filters to US suppliers and that meant that India’s Serum Institute was having trouble getting its production lines ready for Novavax. CureVac, [another potential mRNA vaccine](https://www.reuters.com/business/healthcare-pharmaceuticals/curevac-says-mass-vaccine-rollout-thrown-into-doubt-by-us-restrictions-2021-05-04/), is also finding it difficult to find supplies due to US restrictions (which means supplies are short everywhere). As [Derek Lowe said](https://blogs.sciencemag.org/pipeline/archives/2021/04/22/a-look-at-novavax):

Abolishing patents will not provide more shaker bags or more Chilean tree bark, nor provide more of the key filtration materials needed for production. These processes have a *lot* of **potential choke points** and rate-limiting steps in them, and there is no wand that will wave that complexity away.

Technology transfer has been difficult for AstraZeneca–which is one reason they have had production difficulties–and their vaccine uses relatively well understood technology. The mRNA technology is new and has never before been used to produce at scale. Pfizer and Moderna had to build factories and distribution systems from scratch. There are no mRNA factories idling on the sidelines. If there were, Moderna or Pfizer would be happy to license since they are producing in their own factories 24 hours a day, seven days a week (monopolies restrict supply, remember?). Why do you think China hasn’t [yet produced](https://www.scmp.com/news/china/politics/article/3128998/revolutionary-mrna-vaccines-made-chinese-firms-will-be-ready) an mRNA vaccine? Hint: **it isn’t fear about violating IP**. Moreover, even Moderna and Pfizer don’t yet fully understand their production technology, they are learning by doing every single day. Moderna has said that they won’t enforce their patents during the pandemic but no one has stepped up to produce because no one else can.

The US trade representative’s announcement is virtue signaling to the anti-market left and will do little to nothing to increase supply.