# 1

**Interpretation: “medicines” is a generic bare plural. The aff may not defend WTO member nations reducing intellectual property protections for a subset of medicines.**

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

Both distinctions are important. Generic resolutions can’t be affirmed by specifying particular instances. But, since generics tolerate exceptions, plan-inclusive counterplans (PICs) do not negate generic resolutions. Bare plurals are typically used to express generic generalizations. But there are two important things to keep in mind. First, generic generalizations are also often expressed via other means (e.g., definite singulars, indefinite singulars, and bare singulars). Second, and more importantly for present purposes, bare plurals can also be used to express existential generalizations. For example, “Birds are singing outside my window” is true just in case there are some birds singing outside my window; it doesn’t require birds in general to be singing outside my window. So, what about “colleges and universities,” “standardized tests,” and “undergraduate admissions decisions”? Are they generic or existential bare plurals? On other topics I have taken great pains to point out that their bare plurals are generic—because, well, they are. On this topic, though, I think the answer is a bit more nuanced. Let’s see why. “Colleges and universities” is a generic bare plural. I don’t think this claim should require any argument, when you think about it, but here are a few reasons. First, ask yourself, honestly, whether the following speech sounds good to you: “Eight colleges and universities—namely, those in the Ivy League—ought not consider standardized tests in undergraduate admissions decisions. Maybe other colleges and universities ought to consider them, but not the Ivies. Therefore, in the United States, colleges and universities ought not consider standardized tests in undergraduate admissions decisions.” That is obviously not a valid argument: the conclusion does not follow. Anyone who sincerely believes that it is valid argument is, to be charitable, deeply confused. But the inference above would be good if “colleges and universities” in the resolution were existential. By way of contrast: “Eight birds are singing outside my window. Maybe lots of birds aren’t singing outside my window, but eight birds are. Therefore, birds are singing outside my window.” Since the bare plural “birds” in the conclusion gets an existential reading, the conclusion follows from the premise that eight birds are singing outside my window: “eight” entails “some.” If the resolution were existential with respect to “colleges and universities,” then the Ivy League argument above would be a valid inference. Since it’s not a valid inference, “colleges and universities” must be a generic bare plural. Second, “colleges and universities” fails the [upward-entailment test](https://plato.stanford.edu/entries/generics/#IsolGeneInte) for existential uses of bare plurals. Consider the sentence, “Lima beans are on my plate.” This sentence expresses an existential statement that is true just in case there are some lima beans on my plate. One test of this is that it entails the more general sentence, “Beans are on my plate.” Now consider the sentence, “Colleges and universities ought not consider the SAT.” (To isolate “colleges and universities,” I’ve eliminated the other bare plurals in the resolution; it cannot plausibly be generic in the isolated case but existential in the resolution.) This sentence does not entail the more general statement that educational institutions ought not consider the SAT. This shows that “colleges and universities” is generic, because it fails the upward-entailment test for existential bare plurals. Third, “colleges and universities” fails the adverb of quantification test for existential bare plurals. Consider the sentence, “Dogs are barking outside my window.” This sentence expresses an existential statement that is true just in case there are some dogs barking outside my window. One test of this appeals to the drastic change of meaning caused by inserting any adverb of quantification (e.g., always, sometimes, generally, often, seldom, never, ever). You cannot add any such adverb into the sentence without drastically changing its meaning. To apply this test to the resolution, let’s again isolate the bare plural subject: “Colleges and universities ought not consider the SAT.” Adding generally (“Colleges and universitiesz generally ought not consider the SAT”) or ever (“Colleges and universities ought not ever consider the SAT”) result in comparatively minor changes of meaning. (Note that this test doesn’t require there to be no change of meaning and doesn’t have to work for every adverb of quantification.) This strongly suggests what we already know: that “colleges and universities” is generic rather than existential in the resolution.

#### It applies to “Medicines” – 1] upward entailment test – “reduce intellectual property protections for medicines” doesn’t entail reducing protections for aids, because it doesn’t prove that we should derestrict other beneficial tech. It passes the adverb test -- “WTO usually ought to reduce intellectual property protections for medicines” doesn’t substantially change the meaning of the res. Outweighs their evidence – it tells us what to do with indefinite singulars, whereas theirs assumes indefinite singulars can only mean one thing.

#### Violation {x}

#### Standards:

#### 1) Jurisdiction - not affirming the res is not following the pre-set burden meaning the judge can’t vote aff since there was not one, so presume neg.

#### 2) Predictability- with a unlimited topic the neg can never predict what the aff will read. This leads to less clash on case which decreases topic edu. Also kills fairness because I need evd in the first place to win the round

#### 3) Limits – The aff explodes limits justifies an infinite caselist. They can reduce the smallest of IP protections for the most obscure disease. Limits outweighs and is a prerequisite to their offense because we need equal prep burdens to have an equal debate kills fairness.

#### 4) Ground – we lose generics, politics, WTO cred, Innovation, China all reliy on sweeping changes to IP. Ground is key to fairness if my prep never link I can never win.

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

#### 6) TVA – just read your aff as an advantage under a whole adv, solves all ur offense since I can read normal means evidence

#### Fairness is a voter because debate is a game with a winner and loser where everyone has a drive to win only fairness can fulfill that drive

#### Education is a voter because it’s the constitutive purpose of debate – educational institutions would fund debate if it was not educational

#### Drop the debater – a] deter future abuse and b] set better norms for debate [3] it’s a fundamental baseline for debate-ability.

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

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

#### Comes before 1AR theory — A - If we had to be abusive it’s because it was impossible to engage their aff, B - T outweighs on scope because their abuse affected every speech that came after the 1AC

# 2

#### Interpretation - Reduce means permanent reduction – it’s distinct from “delay.”

**Reynolds 59** (Judge (In the Matter of Doris A. Montesani, Petitioner, v. Arthur Levitt, as Comptroller of the State of New York, et al., Respondents [NO NUMBER IN ORIGINAL] Supreme Court of New York, Appellate Division, Third Department 9 A.D.2d 51; 189 N.Y.S.2d 695; 1959 N.Y. App. Div. LEXIS 7391 August 13, 1959, lexis)

Section 83's counterpart with regard to nondisability pensioners, section 84, prescribes a reduction only if the pensioner should again take a public job. The disability pensioner is penalized if he takes any type of employment. The reason for the difference, of course, is that in one case the only reason pension benefits are available is because the pensioner is considered incapable of gainful employment, while in the other he has fully completed his "tour" and is considered as having earned his reward with almost no strings attached. It would be manifestly unfair to the ordinary retiree to accord the disability retiree the benefits of the System to which they both belong when the latter is otherwise capable of earning a living and had not fulfilled his service obligation. If it were to be held that withholdings under section 83 were payable whenever the pensioner died or stopped his other employment the whole purpose of the provision would be defeated, i.e., the System might just as well have continued payments during the other employment since it must later pay it anyway.  [\*\*\*13] The section says "reduced", does not say that monthly payments shall be temporarily suspended; it says that the pension itself shall be reduced. The plain dictionary meaning of the word is to diminish, lower or degrade. The word "reduce" seems adequately to indicate permanency.

#### 2] Violation – they dealy, that is not a permeant reduction.

#### 3] Vote neg for limits and neg ground – re-instatement under any infinite number of conditions doubles aff ground – every plan becomes either temporary or permanent – you cherry-pick the best criteria and I must prep every aff while they avoid core topic discussions like reduction-based DAs which decks generics like Pharma Innovation and Bio-Tech.

#### c/a paradigm issues

# 3

#### Infrastructure and reconciliation are the priority now. they’ll pass by new deadline

Alemany 10/12 [Jacqueline Alemany and Theodoric Meyer, "The new deadline to pass Biden's agenda is coming up fast", 10/12/21, https://www.washingtonpost.com/politics/2021/10/13/new-deadline-pass-biden-agenda-is-coming-up-fast/]

New deadline, old problems: Less than two weeks after House Democrats missed a deadline to hold a vote on the infrastructure bill, the party is staring down another one.

House Speaker Nancy Pelosi and Senate Majority Leader Chuck Schumer say they’re aiming to pass the $1.2 trillion infrastructure bill and a larger package stuffed full of Democrats’ child care, health care and climate change priorities by Oct. 31, when a short-term extension of highway funding is set to run out.

Coincidentally, Oct. 31 is the day before the much-anticipated United Nations climate summit kicks off in Glasgow, where administration officials are eager to show off legislation that would establish credibility in negotiations with foreign governments. White House press secretary Jen Psaki told reporters last month that Biden expected the reconciliation bill — much of which is focused on fighting climate change — would “move forward in advance of that.”

(Asked about it on Tuesday, Psaki said Biden would tout the administration's commitment to combating climate change in Glasgow “regardless of where the package stands.”)

And two days later, Virginians will head to the polls to elect a new governor in a contest lawmakers and the White House are watching closely. Former Democratic Gov. Terry McAuliffe has implored Democrats in Washington to pass the infrastructure bill by Election Day.

The 18-day sprint

Can Democrats really pass two massive bills in the next 18 days?

“Yes,” Rep. Gerry Connolly (D-Va.) told The Early yesterday evening. “Will it is a different matter. But can it? Yeah. We’re experts at coming right up against the edge and pulling a miracle.”

#### Manchin’s on board to make a deal—but­—tensions within the party could ruin it

Leonhardt 10/1 [David Leonhardt, "Democrats, Divided", NYT, 10/1/21, https://www.nytimes.com/2021/10/01/briefing/infrastructure-bill-democrats-divided.html]

These are many of the same priorities that progressives have, even if Manchin’s proposed cost means that the party will need to make hard choices about what to exclude from the bill. But the terms of the negotiations now seem clearer than they have been.

Manchin himself suggested as much. “We need a little bit more time,” he said yesterday, according to Chad Pergram of Fox News. “We’re going to come to an agreement.”

Several political analysts echoed that confidence:

Matt Glassman of Georgetown: “Oddly, now that the progressives have done their flex, I think the prospects for a deal increased a bit.”

Russell Berman, The Atlantic: “These setbacks are not final or fatal, and time is still on their side. The deadlines Democrats missed this week were largely artificial, and House leaders said a vote on the infrastructure bill could still happen as early as Friday.”

Karen Tumulty, Washington Post: “My theory: We are moving toward a deal. … What everyone is waiting for at this point is an announcement by Biden of a deal, and a call from the president for Democrats to rally around it.”

The Democrats have enormous incentives to come to agreement. If they fail, Biden’s domestic agenda is largely sunk, and the party will have forfeited a chance to pass major legislation while controlling the White House, the Senate and House — a combination that does not come along often. Democrats will also have to face voters in next year’s midterms looking divided if not incompetent.

All of that suggests they will find a path to an agreement. But it’s far from assured. The tensions within the party are more serious than they have been in years.

#### Only Biden can get Manchin and Sinema on board—they’re directly negotiating

Golshan 10/14 [Tara Golshan, "Democrats Float Possible $2.5 Trillion Compromise Reconciliation Framework", 10/14/21, https://www.huffpost.com/entry/reconciliation-bill-price-tag-white-house\_n\_61671e35e4b028316c90b6cc?4i9]

The presentation offers a possible compromise top-line number that leaders, including Biden, have floated for weeks.

“This presentation was Leader Schumer informing Senate Democrats of what President Biden presented to the House Democrats the week prior,” Justin Goodman, a spokesperson for Senate Majority Leader Chuck Schumer (N.Y.), said.

But even $2.5 trillion is higher than what Sens. Joe Manchin (D-W.Va.) and Kyrsten Sinema (D-Ariz.), the Senate’s two most conservative Democrats, say they will support.

Manchin has floated a $1.5 trillion top-line spending number. Sinema refuses to disclose a top-line number to her Senate colleagues, but she’s reportedly comfortable with a figure under the $2 trillion mark.

“As with any bill of such historic proportions, not every member will get everything he or she wants,” Schumer said in a letter to the caucus on Thursday, while senators were in their home states. “I deeply appreciate the sacrifices made by each and every one of you.”

There’s hope among some Senate and administration staff that Manchin and Sinema will go along with $1.5 trillion in new spending on the reconciliation bill and exclude the revenue losses from tax cuts in their calculations of the overall price tag.

But Democrats are still skeptical that even this framework would be enough to get the two senators fully on board. Democrats need all 50 of their senators to agree on the reconciliation bill for it to pass. The proposal does not have any Republican support.

“Ever since Manchin and Sinema’s demands were a little more known, people were thinking, what are some gimmicky ways we can get $2.5 trillion while meeting their top line?” one Democratic aide familiar with the situation told HuffPost.

Both Sinema and Manchin have been in direct talks with the White House. Their offices did not return HuffPost’s requests for comment on this proposal.

#### Fighting against big pharma moves time energy and political capital away from domestic legislation

**Bhadrakumar 5/9** M K Bhadrakumar is a former Indian diplomat. "Biden’s talk of vaccine IP waiver is political theater." Asia Times, May 9, 2021, asiatimes.com/2021/05/bidens-talk-of-vaccine-ip-waiver-is-political-theater.

On the other hand, Biden, whose political life of half a century was largely spent in the US Congress, is well aware of the **awesome clout** of the pharmaceutical companies in American politics. From that lobby’s perspective, the patent waiver “amounts to the expropriation of the property of the pharmaceutical companies whose innovation and financial investments made the development of Covid-19 vaccines possible in the first place,” as a senior scholar at the Johns Hopkins Center for Health Security puts it. The US pharmaceutical industry and congressional Republicans have already **gone on the offensiv**e blasting Biden’s announcement, saying it undermines incentives for American innovation. Besides, the argument goes, even with the patent waiver, vaccine manufacturing is a complex process and is not like simply flipping a switch. Senator Richard Burr, the top Republican on the US Senate Health Committee, denounced Biden’s decision. “Intellectual property protections are part of the reason we have these life-saving products,” he said. “Stripping these protections only ensures we won’t have the vaccines or treatments we need when the next pandemic occurs.” The Republican senators backed by Republican Study Committee chairman Jim Banks propose to introduce legislation to block the move. Clearly, Biden would rather **spend his political capital on getting the necessary legislation through Congress to advance his domestic reform agenda rather than spend time and energy to take on the pharmaceutical industry** to burnish his image as a good Samaritan on the world stage. Conceivably, Biden could be counting on the “text-based negotiations” at the WTO dragging on for months, if not years, without reaching anywhere. The US support for the waiver could even be a tactic to persuade pharmaceutical firms to back less drastic steps like sharing technology and expanding joint ventures to boost global production quickly. So far Covid-19 vaccines have been distributed primarily to the wealthy countries that developed them, while the pandemic sweeps through poorer ones such as India, and the real goal is, after all, expanded vaccine distribution. Biden is well aware that there will be **huge opposition** to the TRIPS waiver from the United States’ **European allies as well**. The British press has reported that the UK has been in closed-door talks at the World Trade Organization in recent months along with the likes of Australia, Canada, Japan, Norway, Singapore, the European Union and the US, who all opposed the idea.

#### Infrastructure secures the vulnerable grid.

Carney 21 [Chris, August 6; Senior Policy Advisor at Nossaman LLC, former US Representative, Former Professor of Political Science at Penn State University; JD Supra, “The US Senate Infrastructure Bill: Securing Our Electrical Grid Through P3s and Grants,” https://www.jdsupra.com/legalnews/the-us-senate-infrastructure-bill-4989100/]

As we begin to better understand the main components of the Infrastructure Investment and Jobs Act that the US Senate is working to pass this week, it is clear that public-private partnerships ("P3s") are a favored funding mechanism of lawmakers to help offset high costs associated with major infrastructure projects in communities. And while past infrastructure bills have used P3s for more conventional projects, the current bill also calls for P3s to help pay for protecting the US electric grid from cyberattacks. Responding to the increasing number of cyberattacks on our nation’s infrastructure, and given the fragile physical condition of our electrical grid, the Senate included provisions to help state, local and tribal entities harden electrical grids for which they are responsible.

Section 40121, Enhancing Grid Security Through Public-Private Partnerships, calls for not only physical protections of electrical grids, but also for enhancing cyber-resilience. This section seeks to encourage the various federal, state and local regulatory authorities, as well as industry participants to engage in a program that audits and assesses the physical security and cybersecurity of utilities, conducts threat assessments to identify and mitigate vulnerabilities, and provides cybersecurity training to utilities. Further, the section calls for strengthening supply chain security, protecting “defense critical” electrical infrastructure and buttressing against a constant barrage of cyberattacks on the grid. In determining the nature of the partnership arrangement, the size of the utility and the area served will be considered, with priority going to utilities with fewer available resources.

Section 40122 compliments the previous section as it seeks to incentivize testing of cybersecurity products meant to be used in the energy sector, including SCADA systems, and to find ways to mitigate any vulnerabilities identified by the testing. Intended as a voluntary program, utilities would be offered technical assistance and databases of vulnerabilities and best practices would be created. Section 40123 incentivizes investment in advanced cybersecurity technology to strengthen the security and resiliency of grid systems through rate adjustments that would be studied and approved by the Secretary of Energy and other relevant Commissions, Councils and Associations.

Lastly, Section 40124, a long sought-after package of cybersecurity grants for state, local and tribal entities is included in the bill. This section adds language that would enable state, local and tribal bodies to apply for funds to upgrade aging computer equipment and software, particularly related to utilities, as they face growing threats of ransomware, denial of service and other cyberattacks. However, under Section 40126, cybersecurity grants may be tied to meeting various security standards established by the Secretary of Homeland Security, and/or submission of a cybersecurity plan by a grant applicant that shows “maturity” in understanding the cyber threat they face and a sophisticated approach to utilizing the grant.

While the final outcome of the Infrastructure Investment and Jobs Act may still be weeks or months away, inclusion of these provisions not only demonstrates a positive step forward for the application of federal P3s and grants generally, they also show that Congress recognizes the seriousness of the cyber threats our electrical grids face. Hopefully, through judicious application of both public-private partnerships and grants, the nation can quickly secure its infrastructure from cyberattacks.

#### Grid vulnerabilities spark nuclear war.

Klare 19 [Michael; November; Professor Emeritus of Peace and World Security Studies at Hampshire College; Arms Control Association, “Cyber Battles, Nuclear Outcomes? Dangerous New Pathways to Escalation,” https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation]

Yet another pathway to escalation could arise from a cascading series of cyberstrikes and counterstrikes against vital national infrastructure rather than on military targets. All major powers, along with Iran and North Korea, have developed and deployed cyberweapons designed to disrupt and destroy major elements of an adversary’s key economic systems, such as power grids, financial systems, and transportation networks. As noted, Russia has infiltrated the U.S. electrical grid, and it is widely believed that the United States has done the same in Russia.12 The Pentagon has also devised a plan known as “Nitro Zeus,” intended to immobilize the entire Iranian economy and so force it to capitulate to U.S. demands or, if that approach failed, to pave the way for a crippling air and missile attack.13

The danger here is that economic attacks of this sort, if undertaken during a period of tension and crisis, could lead to an escalating series of tit-for-tat attacks against ever more vital elements of an adversary’s critical infrastructure, producing widespread chaos and harm and eventually leading one side to initiate kinetic attacks on critical military targets, risking the slippery slope to nuclear conflict. For example, a Russian cyberattack on the U.S. power grid could trigger U.S. attacks on Russian energy and financial systems, causing widespread disorder in both countries and generating an impulse for even more devastating attacks. At some point, such attacks “could lead to major conflict and possibly nuclear war.”14

# CP

#### Plan: the member nations of the World Trade Organization ought to delay patent enforcement for cannabis except for the us.

# Case

#### They don’t say they get it in the first place but no 1ar theory: [a] I only have one speech to respond which outweighs on infinite abuse because they can read any number of shells [b] aff frames the round means they pick neg ground and if the 1ar is hard, they should just write a better aff [c] 1ar restart, 4-6-3 time skew, infinite abuse. [d] No 3NR to address 2AR contextualization makes judge intervention inevitable as it comes down to whether the 2N coverage was “good enough”

#### 2] Use reasonability on 1ar theory – [a] Competing interps moots 7 mins of NC offense which outweighs minimal neg abuse. [b] Offense-defense disincentivizes substantive education by shifting the round from substance to a norm so their model prioritizes diminishing marginal skews over substance. That o/ws – the end goal of theory is better substantive debates.

#### 3] neg theory highest layer of the round a) framing of the round b) if the aff was abusive the neg is justified in responding

#### 4] Accept neg paradigm issues – otherwise they can put infinite spin on 1nc contextualization which means we never have good theory debates if we are disagreeing on the rules of the game. Leads to infinite theory debates, which kills the point of theory.

#### Monopoly argument misleading. Market share is complex stuff.

Lietzan 2020 [Erika, Professor of Law, University of Missouri School of Law] “The Evergreening Myth.” **Cato Institute** <https://www.cato.org/regulation/fall-2020/evergreening-myth/EDM>

Myth that automatic substitution is critical / The final myth of evergreening is that continuing innovation — especially when an innovator introduces a newer version of its product and stops selling its old version — precludes uptake of less expensive medicines by interfering with automatic pharmacy substitution under state pharmacy law. This myth reflects an assumption that competitors who file abbreviated applications depend on automatic pharmacy substitution — rather than the ordinary rough and tumble of a competitive marketplace — to obtain market share. The truth may be more complicated. Automatic pharmacy substitution arises through a combination of longstanding FDA practices and state pharmacy law. Once the agency has approved two products with the same active ingredient, it assesses whether they are “therapeutically equivalent.” Designating two as therapeutically equivalent means that they have the same clinical profile and that they can be “substituted”: either can be dispensed instead of the other. A true generic drug, an exact copy of the innovator’s product approved based on an ANDA, will be deemed therapeutically equivalent. Every state either permits or requires pharmacists to dispense a therapeutically equivalent generic drug when a doctor prescribes an innovator’s drug by its brand name, unless the doctor has said not to. The notion advanced by critics of alleged “evergreening” is that once an innovator introduces a newer version of its branded product, doctors will prescribe the newer version. And because the generic company instead copied the older version, pharmacists will not — cannot under state law — substitute the generic product when the patient presents a prescription for the newer innovator product. The problem with this argument is that actual dispensing decisions probably reflect a more complex interaction of prescriber decisions, payer preferences, and state law.

#### Strong IPR is key to innovation – empirics and FDI

Ezell and Cory 19 [Stephen Ezell, BS from School of Foreign Service at Georgetown, VP of global innovation policy at Information Technology and Innovation Foundation. Nigel Cory, MA in public policy from Georgetown, BA in international business from Griffith University, Associate Director of trade policy at Information Technology and Innovation Foundation, former researcher in the Southeast Asia Program at the Center for Strategic and International Studies.] “The Way Forward for Intellectual Property Internationally,” Information Technology and Innovation Foundation, April 25, 2019, <https://itif.org/publications/2019/04/25/way-forward-intellectual-property-internationally> TG

* FDI – foreign direct investment

IPRs Strengthen Innovation

Intellectual property rights power innovation. For instance, analyzing the level of intellectual property protections (via the World Economic Forum’s Global Competitiveness reports) and creative outputs (via the Global Innovation Index) shows that countries with stronger IP protection have more creative outputs (in terms of intangible assets and creative goods and services in a nation’s media, printing and publishing, and entertainment industries, including online), even at varying levels of development.46

IPR reforms also introduce strong incentives for domestic innovation. Sherwood, using case studies from 18 developing countries, concluded that poor provision of intellectual property rights deters local innovation and risk-taking.47 In contrast, IPR reform has been associated with increased innovative activity, as measured by domestic patent filings, albeit with some variation across countries and sectors.48 For example, Ryan, in a study of biomedical innovations and patent reform in Brazil, found that patents provided incentives for innovation investments and facilitated the functioning of technology markets.49 Park and Lippoldt also observed that the provision of adequate protection for IPRs can help to stimulate local innovation, in some cases building on the transfer of technologies that provide inputs and spillovers.50 In other words, local innovators are introduced to technologies first through the technology transfer that takes place in an environment wherein protection of IPRs is assured; then, they may build on those ideas to create an evolved product or develop alternate approaches (i.e., to innovate). Related research finds that trade in technology—through channels including imports, foreign direct investment, and technology licensing—improves the quality of developing-country innovation by increasing the pool of ideas and efficiency of innovation by encouraging the division of innovative labor and specialization.51 However, Maskus notes that without protection from potential abuse of their newly developed technologies, foreign enterprises may be less willing to reveal technical information associated with their innovations.52 The protection of patents and trade secrets provides necessary legal assurances for firms wishing to reveal proprietary characteristics of technologies to subsidiaries and licensees via contracts.

The relationship between IPR rights and innovation can also be seen in studies of how the introduction of stronger IPR laws, with regard to patents, copyrights, and trademarks, affect R&D activity in an economy. Studies by Varsakelis and by Kanwar and Evenson found that R&D to GDP ratios are positively related to the strength of patent rights, and are conditional on other factors.53 Cavazos Cepeda et al. found a positive influence of IPRs on the level of R&D in an economy, with each 1 percent increase in the level of protection of IPRs in an economy (as measured by improvements to a country’s score in the Patent Rights Index) equating to, on average, a 0.7 percent increase in the domestic level of R&D.54 Likewise, a 1 percent increase in copyright protection was associated with a 3.3 percent increase in domestic R&D. Similarly, when trademark protection increased by 1 percent, there was an associated R&D increase of 1.4 percent. As the authors concluded, “Increases in the protection of the IPRs carried economic benefits in the form of higher inflows of FDI, and increases in the levels of both domestically conducted R&D and service imports as measured by licensing fees.”55 As Jackson summarized, regarding the relationship between IPR reform and both innovation and R&D, and FDI, “In addition to spurring domestic innovation, strong intellectual property rights can increase incentives for foreign direct investment which in turn also leads to economic growth.”56

#### No eslcation, the evd is terrible, 1 who do they nuc if it is Mexico where does the exlatioin past that occur, they don’t have clear explntion for how any of this functions

#### extemp

#### No CBW impact

Revill ’17 [Dr. James Revill, Research Fellow with the Harvard Sussex Program at SPRU, Past as Prologue? The Risk of Adoption of Chemical and Biological Weapons by Non-State Actors in the EU, European Journal of Risk Regulation, 8 (2017), pp. 626–642, https://www.cambridge.org/core/services/aop-cambridge-core/content/view/6B824CDE0E25FD86AC3D0BD07822A743/S1867299X17000356a.pdf/div-class-title-past-as-prologue-the-risk-of-adoption-of-chemical-and-biological-weapons-by-non-state-actors-in-the-eu-div.pdf]

Although some relatively simple approaches could cause significant harm, mass casualty attacks still require considerable expertise, something particularly acute in the context of biological weapons.52 The most effective route to weaponising biology is arguably through the process of aerosolising agents, something recognised mid-way through the last century as opening up the theoretical possibility of using biological weapons on a gigantic scale.53

However, realising such theoretical potential is difficult and it took states decades to develop more predictable biological weapons,54 and even then such weapons were acutely vulnerable to environmental factors.55 For non-state groups such complexity has proven a significant barrier to CBW development. By means of an example, one of the best-resourced biological weapons programs, that of Aum Shinrikyo, failed variously because the group acquired the wrong strain, contaminated fermenters and were faced with insurmountable production and dissemination difficulties.56 There are of course exceptions, such as the 2001 anthrax Letter Attacks in the US. However, if one accepts the conclusions of the FBI that this sophisticated attack with aerosolised anthrax in the US postal system was perpetrated by a US biodefence researcher, Dr Bruce Ivins,57 it is an exception that proves the rule.

To circumvent the difficulties with aerosolisation, arguably one could use human-to-human transmissible biological agents as part of a suicide bioterror operation. There are good reasons for concern over how crude suicide bioterrorists could employ such a tactic. However, the use of highly contagious agents is also poorly predictable and would have to deal with social factors, such as the “spatial contact process among individuals”, which can spell “out the difference between large-scale epidemics and abortive ones”.58

The counter to this argument is the growing access to data and the changing human geography of the life sciences. Some 83% of European households reportedly are online, effectively allowing access to what is a growing body of available data on CBW, including so-called bioterrorist “recipes” and “blueprints” that are available in both mainstream scientific as well as more subversive literatures online. It is also clear that there is a changing human geography in European life sciences (for peaceful purposes), with the emergence of 30 DIY-bio groups located in Europe59 and some 80 European teams in the international Genetically Engineered Machines (IGEM) competition in 2016.60 This is compounded by reports that groups such as Daesh have deliberately sought to recruit foreign fighters “including some with degrees in physics, chemistry, and computer science, who experts believe have the ability to manufacture lethal weapons from raw substances”.61

Whilst it would be unwise to ignore such developments, there is a need for caution in looking at the extent to which new technologies and geographies will facilitate the adoption of chemical and biological weapons by groups seeking to target European countries. First, data is not information, and information is not knowledge, let alone the tacit knowledge required for CBW.62 In many cases a degree of determination and dedication will be required merely to separate online fantasy from fact and identify operationally useful information (of relevance to the European context) from nonsense (or information pertinent to contexts other than Europe). Second, with new technologies there is the potential for such tools to enable some, but certainly not all, actors, and even then new technologies bring new challenges. CRISPR, gene editing technology is currently seen as a particular source of promise and peril, which purportedly enables “even largely untrained people to manipulate the very essence of life”.63 As much may be technically true, yet “untrained people” would nonetheless require some guidance in identifying suitable areas of genetic structures to manipulate. Moreover, CRISPR would only get aspiring weaponeers so far, with the process of culturing, scaling-up and weaponisation still requiring considerable attention and interdisciplinary skills, typically generated through “large interdisciplinary teams of scientists, engineers, and technicians”,64 in order to be effective.

Indeed, for all the progress in science and technology, biological weapons are still not used, in part, because of the complexity of such weapons; and the chemical weapons that are used today are largely the same as the chemical weapons of 100 years ago. As Robinson noted “It remains the case today that, in the design of CBW, increasingly severe technological constraint sets in as the mass-destruction end of the spectrum is approached: the greater and more assured the area-effectiveness sought for the weapon, the greater the practical difficulties of achieving it”.65