**1 – Comic Sans Theory**

#### Interp: debaters must use comic sans as their font in their speech docs.

#### Violation – the doc is in calibri

#### Prefer -

#### Inclusion – comic sans is easiest to read for people with dyslexia.

**Hudgins 17** “Hating Comic Sans Is Ableist” Lauren Hudgins Feb 23, 2017 <https://medium.com/the-establishment/hating-comic-sans-is-ableist-bc4a4de87093> OHS-AT

The irregular shapes of the letters in Comic Sans allow her to focus on the individual parts of words. While many fonts use repeated shapes to create different letters, such as a “p” rotated to made a “q,” Comic Sans uses few repeated shapes, creating distinct letters (although it does have a mirrored “b” and “d”). Comic Sans is one of a few typefaces recommended by influential organizations like the British Dyslexia Association and the Dyslexia Association of Ireland. Using Comic Sans has made it possible for Jessica to complete a rigorous program in marine zoology at Bangor University in Wales.

#### To pre-empt the 1AR - the ability to change the font doesn’t solve – it’s ableist to expect them to do something for your aesthetic preference.

**Hudgins 17** “Hating Comic Sans Is Ableist” Lauren Hudgins Feb 23, 2017 <https://medium.com/the-establishment/hating-comic-sans-is-ableist-bc4a4de87093> OHS-AT

In addition, she cannot proofread in a font that’s difficult for her to read. “You cannot fix formatting errors you cannot see!” To her, asking her to change to a font she cannot adequately use “is the epitome of ableism.” Sometimes she can ask someone in her cohort to help her spot errors, but it’s a lot to ask. “I can and have had people in my class look over my work, but you need to understand that we’re not collaborators, they’re my peers. This is an encroachment on their time.”

Asking her to change her font is asking her to take a task that is already very difficult for someone with dyslexia and demanding that she take extra steps to please the aesthetic preferences of someone for whom reading is easy.

**Inclusion’s an independent voter – you have to be in debate to gain from it and it’s a gateway issue because it ensures everyone benefits from the activity since it’s how people get scholarships, make friends, and improve critical thinking skills**

**2- Kant**

## AT: Kant

#### 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.**

#### Moral and economic rights go hand-in-hand – authors deserve compensation if others benefit from their work.

Pozzo 06 [Riccardo Pozzo (Professor of History of Philosophy at University of Verona, PhD from Saarland University), “Immanuel Kant on Intellectual Property”, Trans/Form/Ação, v.29(2), 2006, p.11-18] SG \*brackets for gendered language

**The peculiarity of intellectual property consists thus first in being indeed a property, but property of an action; and second in being indeed inalienable, but also transferable in commission and license to a publisher. The bond the author has on [their] his work confers [them]** him **a moral right that is indeed a personal right. It is also a right to exploit economically [their] his work in all possible ways, a right of economic use**, which is a patrimonial right. Kant and Fichte argued that **moral right and the right of economic use are strictly connected**, and that the **offense to one implies inevitably offense to the other.** In eighteenth-century Germany, the free use came into discussion among the presuppositions of a democratic renewal of state and society. In his Supplement to the Consideration of Publishing and Its Rights, Reimarus asked writers “instead of writing for the aristocracy, to write for the tiers état of the reader’s world.” (Reimarus, 1791b, p.595). He saluted with enthusiasm the claim of disenfranchising from the monopoly of English publishers expressed in the American Act for the Encouragement of Learning of May 31, 1790. **Kant**, however, **was firm in embracing intellectual property.** Referring himself to Roman Law, he asked for its legislative formulation not only as patrimonial right, but also as a personal right. In Of the Illegitimity of Pirate Publishing, **he considered the moral faculties related to intellectual property as an “inalienable right** (ius personalissimum) always himself to speak through anyone else, the right, that is, that no one may deliver the same speech to the public other than in his (the author’s) name” (Kant, 1902, t.8, p.85). Fichte went farther in the Demonstration of the Illegitimity of Pirate Publishing. He saw intellectual property as a part of his metaphysical construction of intellectual activity, which was based on the principle that thoughts “are not transmitted hand to hand, they are not paid with shining cash, neither are they transmitted to us if we take home the book that contains them and put it into our library. In order to make those thoughts our own an action is still missing: we must read the book, meditate – provided it is not completely trivial – on its content, consider it under different aspects and eventually accept it within our connections of ideas” (Fichte, 1964, t.I/1, p.411). At the center of the discussion was the practice of reprinting books in a pirate edition after having them reset word after words after an exemplar of the original edition. Given Germany’s division in a myriad of small states, the imperial privilege was ineffective against pirate publishing. **Kant** and Fichte **spoke for the acceptance of the right to defend the work of an author by the usurpations of others so that [they] he may receive a patrimonial advantage from those who utilize the work acquiring new knowledge and/or an aesthetic experience.** In particular, Fichte declared the absolute primacy of the moral faculties within the corpus mysticum. He divided the latter into a formal and a material part. “This intellectual element must be divided anew into what is material, the content of the book, the thoughts it presents; and the form of these thoughts, the manner in which, the connection in which, the formulations and the words by means of which the book presents them” (Fichte, 1964, t.I/1, p.411). Fichte’s underlining the author’s exclusive right to the intellectual content of his book – “the appropriation of which through another is physically impossible” (ibid.) – brought him to the extreme of prohibiting any form of copy that is not meant for personal use.

#### 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.**

#### Coercion isn’t universalisable – willing one’s freedom while violating others’ is a conceptual contradiction.

Engstrom [Stephen Engstrom, (Professor of Philosophy @ the University of Pittsburgh) "Universal Legislation as the Form of Practical Knowledge" http://www.academia.edu/4512762/Universal\_Legislation\_As\_the\_Form\_of\_Practical\_Knowledge]

Given the preceding considerations, it’s a straightforward matter to see how **a maxim of action that assaults the freedom of others with a view to furthering one’s own ends results in a contradiction when we attempt to will it as a universal law** in accordance with the foregoing account of the formula of universal law. **Such a maxim would lie in a practical judgment that deems it good on the whole to act to limit others’ outer freedom, and hence their self-sufficiency, their capacity to realize their ends**, where doing so augments, or extends, one’s own outer freedom **and** so also **one’s own self-sufficiency**.  Now on the interpretation we’ve been entertaining, applying the formula of universal law involves considering whether it’s possible for every person—every subject capable of practical judgment—to share the practical judgment asserting the goodness of every person’s acting according to the maxim in question. Thus in the present case the application of the formula involves considering whether it’s possible for every person to deem good every person’s acting to limit others’ freedom, where practicable, with a view to augmenting their own freedom. Since here **all persons are on the one hand deeming good both the limitation of others’ freedom and the extension of their own freedom, while on the other hand, insofar as they agree with the similar judgments of others, also deeming good the limitation of their own freedom and the extension of others’ freedom, they are all deeming good both the extension and the limitation of both their own and others’ freedom. These judgments are inconsistent insofar as the extension of a person’s outer freedom is incompatible with the limitation of that same freedom.**

**3 – Innovation**

#### IP protections motivate innovators to take risks – that triggers tech prolif in medicine and related fields – guarantees long-term development due to continuous incentives.

Bacchus '20 (James Bacchus; James Bacchus is a member of the Herbert A. Stiefel Center for Trade Policy Studies, the Distinguished University Professor of Global Affairs and director of the Center for Global Economic and Environmental Opportunity at the University of Central Florida. He was a founding judge and was twice the chairman—the chief judge—of the highest court of world trade, the Appellate Body of the World Trade Organization in Geneva, Switzerland.; 12-16-2020; "An Unnecessary Proposal: A WTO Waiver of Intellectual Property Rights for COVID-19 Vaccines"; https://www.cato.org/free-trade-bulletin/unnecessary-proposal-wto-waiver-intellectual-property-rights-covid-19-vaccines#, Cato Institute, accessed 7-21-2021; JPark)

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 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. In the short term, undermining private IP rights may accelerate distribution of goods and services—where the novel knowledge that went into making them **already exists**. But in the **long term**, undermining private IP rights would **eliminate** the **incentives** that inspire innovation, thus preventing the discovery and development of knowledge for new goods and services that **the world needs**. This widespread dismissal of the link between private IP rights and innovation is perhaps best reflected in the fact that although the United Nations Sustainable Development Goals for 2030 aspire to “foster innovation,” they make no mention of IP rights.19

#### Pharmaceutical innovation is key to protecting against future pandemics, bioterrorism, and antibiotic resistance.

Marjanovic and Fejiao ‘20 Marjanovic, Sonja, and Carolina Feijao. Sonja Marjanovic, Ph.D., Judge Business School, University of Cambridge. Carolina Feijao, Ph.D. in biochemistry, University of Cambridge; M.Sc. in quantitive biology, Imperial College London; B.Sc. in biology, University of Lisbon. "Pharmaceutical Innovation for Infectious Disease Management: From Troubleshooting to Sustainable Models of Engagement." (2020). [Quality Control]

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

#### Bioterror is the largest medical threat—it outweighs natural pandemics

Bakerlee ‘21 Chris Bakerlee is a Ph.D. candidate studying evolutionary genetics at Harvard University and a fellow in the Council on Strategic Risks’s Fellowship for Ending Bioweapons Programs. "Mother Nature is not 'the ultimate bioterrorist' - STAT." STAT, 8 Jan. 2021, www.statnews.com/2021/01/08/mother-nature-is-not-the-ultimate-bioterrorist. [Quality Control]

Taken together, these examples show that this meme no longer serves us well. It is undoubtedly a **mistake** to underestimate the **threats from natural pathogens**. At the same time, it is equally unwise to wield this 19-year-old expression like a magic wand, intending to briskly banish concerns about people causing harm with biology. We can’t afford to blind ourselves or others to the uncomfortable truth that, with each passing day, humans grow more capable of outdoing nature and harnessing biotechnology **to cause harm on a staggering scale**, by either cruelty or carelessness. Nature has no interests, motives, or political goals. To the extent it can be said to “want” anything, it is to perpetually enhance populations’ differential reproductive success, which only rarely aligns with causing greater harm to humans. Notably, the trillions of bacteria living in the average human’s colon appear to have adapted toward a peaceful and often mutually beneficial coexistence with their host. And even deadly pathogens may theoretically evolve toward making humans less sick if doing so opens up more opportunities for transmission between hosts. The process of natural selection, for all its power, is highly constrained in its ability to generate “superbugs” possessing a diabolical suite of traits. Like human bioengineers, natural selection must work around stubborn physiological trade-offs between traits, such as genome replication rate and mutation rate. But natural selection is also handicapped by near-sightedness, driving improvements in traits that enhance a population’s fitness in its current environment with **no attention to** maintaining or improving **traits that enhance fitness in other environments**. If creating an especially deadly pathogen were like winning a soccer match against a formidable opponent, natural selection would be competing with all the cunning of **a**n especially persistent **horde of 5-year-olds**, glued to the ball and only ever capable of playing offense, defense, or goalie at any one time. By contrast, modern **biologists are gaining the ability to see the whole field**, develop an intuition about where the ball will be next, and play multiple positions simultaneously. Through a combination of rational design, directed evolution, breeding, and brute force trial and error, they can increasingly engineer organisms that excel in multiple desired functions at once, such as the ability to grow quickly in a massive industrial fermenter while churning out commercially valuable biomolecules. This growing capability promises tremendous benefits for agriculture, industry, and human health, but its potential application to the creation of pathogens **poses serious concerns**. It is worth emphasizing that trained biologists — let alone terrorists — still have difficulty one-upping natural selection’s creative output. Our understanding of biology is very much in its infancy. Yet our knowledge and capabilities are maturing rapidly, as evidenced by Twist’s prolific gene synthesis capabilities, along with recent feats in predicting protein structure, gene editing, and genome assembly. We are much closer to this exciting but frightening horizon today than we were in 2001, and this trend will likely persist. It’s also worth noting that, when it comes to weapons-grade biotechnology, states likely pose a greater risk than non-state terrorists. States have vastly more resources to support the development of biological weapons, and about **23 are known or suspected to have** maintained **biological weapons** programs in the 20th century. Some programs, like North Korea’s, likely persist to this day. As countries jockey for advantage, state biological weapons programs remain an ever-present danger, despite the treaties and export controls designed to rein them in. Covid-19, which has exposed countries’ **vulnerability to biological threats**, has done little to mitigate this danger. **Accidental releases pose** an **additional** source of **anthropogenic biorisk.** Thanks to the U.S. government’s monitoring program, we know that **dozens of agents** and toxins with the potential to pose a severe threat to public health and agriculture **are** reported **accidentally lost or released** from U.S. labs **every year**. We also know that accidental releases around the world have already caused significant harm. Such risks increase as biotechnology expands across the world and gains in strength. Biotechnology, with all its promise and peril, is moving fast. It’s irresponsible of us to shrug off current and emerging biotechnological threats by reciting “Nature is the ultimate bioterrorist” like some article of faith. As with global warming, the cost of willful ignorance and inaction is high — and increasing. Our health security requires that we engage cautiously but honestly with the full spectrum of evolving biological risks, striving toward solutions with open eyes and moral courage.

#### Bioterrorism leads to extinction – modern technologies can be used to isolate deadly pathogens and target vast populations.

Kellman ‘08 (Barry, Professor of Law, Director, International Weapons Control Center, International Human Rights Law Institute @ DePaul U., Futurist, May 2008, “Bioviolence: A Growing Threat,” http://www.britannica.com/bps/additionalcontent/18/31535413/Bioviolence-A-Growing-Threat)

According to the National Academies of Science, "The threat spectrum is broad and evolving – in some ways predictably, in other ways unexpectedly. In the future, genetic engineering and other technologies may lead to the development of pathogenic organisms with unique, unpredictable characteristics." For as far into the future as we can possibly see, every passing day it be- comes slightly easier to commit a vio lent catastrophe than it was the day before. Indeed, the rapid pace of advancing science helps explain why policies to prevent such a catastrophe are so complicated. Bioviolence Jihad? Some experts argue that terrorists and fanatics are not interested in bio- violence and that the danger might therefore be overblown. Since there have been no catastrophic bioviolence attacks, these experts argue, terrorists lack the intention to make bioweapons. Hopefully, they are correct. But an enormous amount of evidence suggests they are wrong**. From the dawn of biology's ability to isolate pathogens, people have pursued hostile applications** of biological agents. It is perilous to ignore this extensive history by presuming that today's villains are not fervent about weaponizing disease. Not a single state admits to having a bioweapons program, but U.S. intelligence officials assert that as many as **10 states** might have active programs, including North Korea, Iran, and Syria. Moreover, many **terrorist organizations have expressed interest** in acquiring biological weapons. Whatever weight the taboo against inflicting disease might have for nation-states, it is obviously irrelevant to terrorists, criminals, and lunatics. Deterrence by threat of retaliation is essentially meaningless for groups with suicidal inclinations who are likely to intermingle with innocent civilians. Al-Qaeda and affiliated Islamic fundamentalist organizations have abling them to spread in regions where there is no natural immunity. The **polio** virus **has been synthesized from scratch**; its creators called it an "animate chemical." Soon, it may be resynthesized into a form that is contagious even **among vaccinated populations**. Recreation of long-eradicated livestock diseases could **ravage herds** severely lacking in genetic diversity, **damage food supplies, and cause devastating economic losses**. Perhaps the greatest biothreat is the manipulation of the flu and other highly contagious viruses, such as Ebola. Today, scientists can change parts of a virus's genetic material so that it can perform specific functions. The genomic sequence of the Spanish flu virus that killed upwards of 40 million people nearly a century ago has been widely published; **any** savvy **scientist could reconstruct it**. The avian flu is even more lethal, albeit not readily contagious via casual aerosol delivery. A malevolent bio- scientist might augment its contagiousness. The Ebola virus might be manipulated so that it kills more slowly, allowing it to be spread farther before its debilitating effects al- together consume its carrier. A bit further off is genetic manipulation of the measles virus--one of the great killers in human history--rendering useless the immunizations that most of us receive in early childhood. Soon, laboratory resynthesis of smallpox may be possible. Advanced drug delivery systems can be used to **disseminate lethal agents to broad populations**. Bio- regulators--small organic compounds that modify body systems-- could enhance targeted delivery technologies. Some experts are concerned that new weapons could be aimed at the immune, neurological, and neuroendocrine systems. Nanotechnology that lends itself to mechanisms for advanced disease detection and drug delivery--such as gold nanotubes that can administer drugs directly into a tumor--could also de- liver weaponized agents deep into the body, substantially raising the weapon's effectiveness. Altogether, techniques that were on the frontiers of science only a dec- ade or two ago are rapidly mutating A looming danger confronts the world--the threat of bioviolence. It is a danger that will only grow in the future, yet we are increasingly failing to confront it. With every passing day, committing a biocatastrophe becomes a bit easier, and this condition will perpetuate for as long as science progresses. Biological warfare is as old as conflict, of course, but in terms of the objectives of traditional warfare-- gaining territory or resources, compelling the surrender of an opposing army--biological weapons weren't very effective. If the objective is to inflict mass death and panic on a mixed population, however, emerg- ing bioweapons offer remarkable potential. We would be irresponsible to presume that radical jihadists like al- Qaeda have ignored said potential.

# Counterfeit Drugs DA

#### IPR harmonization undermines the ability to market counterfeit drugs.

**Ferrill**, Spring **2007**(Elizabeth – Law Clerk to the Honorable Liam O’Grady, Magistrate Judge, U.S. District Court for the Eastern District of Virginia, Clearing the Swamp for Intellectual Property Harmonization: Understanding and Appreciating the Barriers to Full TRIPS Compliance for Industrializing and Non-Industrializing Countries, University of Baltimore Intellectual Property Law Journal, p. Lexis-Nexis)

In 1994, the Agreement on the Trade-Related Aspects of Intellectual Property Rights (TRIPS) was created. n2 TRIPS requires all 150 members n3 of the World Trade Organization (WTO) to provide minimal standards of protection for intellectual property (IP). n4 **TRIPS** is part of the larger WTO framework that **promotes trade liberalization**. n5 Through a series of [\*138] agreements designed to lower trade tariffs and eliminate other barriers to trade, the WTO strives to improve standards of living of all members, expand production of and trade in goods and services, and sustain development, especially in developing countries worldwide. n6 Most economists view trade liberalization as a means to wealth maximization. n7 If each country produces what it is best at producing, then output of efficiently produced products is higher worldwide. n8 Hence, countries that are the most efficient producer of a certain good would produce that good and trade with other countries for those goods it produces more efficiently, all without the cost of trade barriers. n9 Yet, **countries are reluctant to unilaterally lower their trade barriers**. n10 **To avoid this problem, the WTO established rules for reciprocal** [\*139] **lowering of trade barriers**. n11 In the realm of intellectual property, **harmonization**, defined as the standardization of intellectual property laws, **is analogous to trade liberalization.** If every country were to respect and protect the intellectual property rights of all other countries, inventors and creators would have the maximum incentive to create, mutually benefiting the world. More than a decade after its ratification, there remains tension and widespread noncompliance with **TRIPS**, as many countries **continue to** not **enforce foreign IP rights**, despite the potential benefits of harmonization. **Counterfeiting**, n12 which could be**mitigated by such** **enforcement, costs the world economy about $ 600 billion annually** and includes a multitude of products, such **as pharmaceuticals**, DVDs, software, toys, spare parts for cars and aircraft, and apparel. n13 This prompts the question of why complying with TRIPS and curbing counterfeiting and pirating has been so difficult over the past decade. There are a number of possible explanations.

#### That’s crucial as Low-quality and counterfeit pharmaceuticals make AMR spread globally

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Consequences for the Community **Counterfeit** and/or substandard antimicrobial **medicines** may **promote antimicrobial resistance**. **Emergence of antimicrobial resistance as a result of low-quality antimicrobials has been reported** with antimicrobials that are often used in combination therapy, such as antimalarials (45, 45, 123, 217,–220) and antituberculosis agents (1, 121, 221). The use of substandard products **may lead to underdosing of antibiotics**, **which can increase antimicrobial resistance** (2, 4, 8, 24, 222, 223). **As a result**, in some developing countries **multidrug-resistant bacteria may emerge**, and the development of travel may further promote **the spread of drug-resistant bacteria worldwide** (15, 17, 51). Furthermore, therapeutic failure **prolongs the period of contagiousness and increases the prevalence of infections** from multidrug-resistant pathogens in the community. With regard to malaria, WHO has recommended that if 10% of patients fail treatment, the malaria treatment guidelines should change (224). However, the contribution of substandard/counterfeit medicines to treatment failure for malaria needs to taken into account and addressed in future research studies. Low-quality antimicrobials **may significantly decrease confidence** in the efficacy of certain antibiotics. **Poor-quality antimicrobials may lead physicians to lose confidence** in specific antibiotics and thus to use broad-spectrum antibiotics as the drugs of choice for infections (215, 225). According to the WHO, this may lead to loss of efficacy of relatively inexpensive drugs and will promote the use of more expensive antibiotics that patients in developing countries are not able to afford. The **public confidence in health care systems and in governments may decline significantly**. If **patients** with infectious diseases do not take antimicrobials due to lack of trust in their efficacy, **they remain infectious and pose risks for global public health.**

#### Disease pandemics threaten extinction.

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We fear it is **only a matter of time before** we face a **deadlier and more contagious pathogen**, yet the threat of a deadly pandemic remains dangerously overlooked. **Pandemics now occur with greater frequency, due to** factors such as **climate change, urbanization, and international travel**. Other factors, such as a weak World Health Organization and potentially massive cuts to funding for U.S. scientific research and foreign aid, including funding for the United Nations, stand to deepen our vulnerability. **We also face the specter of novel and mutated pathogens that could spread and kill faster than diseases we have seen before.** With the advent of genome-editing technologies, bioterrorists could artificially engineer **new plagues**, a threat that Ashton Carter, the former U.S. secretary of defense, thinks could **rival nuclear weapons in deadliness**. The two of us have advised the president of Guinea on stopping Ebola. In addition, we have worked on ways to contain the spread of Zika and have informally advised U.S. and international organizations on the matter. Our experiences tell us that the world is unprepared for these threats. We urgently need to change this trajectory. We can start by learning four lessons from the gaps exposed by the Ebola and Zika pandemics. Faster Vaccine Development The most effective way to stop pandemics is with vaccines. However, with Ebola there was no vaccine, and only now, years later, has one proven effective. This has been the case with Zika, too. Though there has been rapid progress in developing and getting a vaccine to market, it is not fast enough, and Zika has already spread worldwide. Many other diseases do not have vaccines, and developing them takes too long when a pandemic is already under way. We need faster pipelines, such as the one that the Coalition for Epidemic Preparedness Innovations is trying to create, to preemptively develop vaccines for diseases predicted to cause outbreaks in the near future. Point-of-Care Diagnostics Even with such efforts, vaccines will not be ready for many diseases and would not even be an option for novel or artificially engineered pathogens. With no vaccine for Ebola, our next best strategy was to identify who was infected as quickly as possible and isolate them before they infected others. Because Ebola’s symptoms were identical to common illnesses like malaria, diagnosis required laboratory testing that could not be easily scaled. As a result, many patients were only tested after several days of being contagious and infecting others. Some were never tested at all, and about 40% of patients in Ebola treatment centers did not actually have Ebola. Many dangerous pathogens similarly require laboratory testing that is difficult to scale. Florida, for example, has not been able to expand testing for Zika, so pregnant women wait weeks to know if their babies might be affected. What’s needed are point-of-care diagnostics that, like pregnancy tests, can be used by frontline responders or patients themselves to detect infection right away, where they live. These tests already exist for many diseases, and the technology behind them is well-established. However, the process for their validation is slow and messy. Point-of-care diagnostics for Ebola, for example, were available but never used because of such bottlenecks. Greater Global Coordination **We need stronger global coordination**. The responsibility for controlling pandemics is fragmented, spread across too many players with no unifying authority. In Guinea we forged a response out of an amalgam of over 30 organizations, each of which had its own priorities. In Ebola’s aftermath, there have been calls for a mechanism for responding to pandemics similar to the advance planning and training that NATO has in place for its numerous members to respond to military threats in a quick, coordinated fashion. This is the right thinking, but we are far from seeing it happen. The errors that allowed Ebola to become a crisis replayed with Zika, and the WHO, which should anchor global action, continues to suffer from a lack of credibility. Stronger Local Health Systems International actors are essential but cannot parachute into countries and navigate local dynamics quickly enough to contain outbreaks. In Guinea it took months to establish the ground game needed to stop the pandemic, with Ebola continuing to spread in the meantime. We need to help developing countries establish health systems that can provide routine care and, when needed, coordinate with international responders to contain new outbreaks. Local health systems could be established for about half of the $3.6 billion ultimately spent on creating an Ebola response from scratch. Access to routine care is also essential for knowing when an outbreak is taking root and establishing trust. For months, Ebola spread before anyone knew it was happening, and then lingered because communities who had never had basic health care doubted the intentions of foreigners flooding into their villages. The turning point in the pandemic came when they began to trust what they were hearing about Ebola and understood what they needed to do to halt its spread: identify those exposed and safely bury the dead. With Ebola and Zika, we lacked these four things — vaccines, diagnostics, global coordination, and local health systems — which are still urgently needed. However, prevailing political headwinds in the United States, which has played a key role in combatting pandemics around the world, threaten to make things worse. The Trump administration is seeking drastic budget cuts in funding for foreign aid and scientific research. The U.S. State Department and U.S. Agency for International Development may lose over one-third of their budgets, including half of the funding the U.S. usually provides to the UN. The National Institutes of Health, which has been on the vanguard of vaccines and diagnostics research, may also face cuts. The Centers for Disease Control and Prevention, which has been at the forefront of responding to outbreaks, remains without a director, and, if the Affordable Care Act is repealed, would lose $891 million, 12% of its overall budget, provided to it for immunization programs, monitoring and responding to outbreaks, and other public health initiatives. Investing in our ability to prevent and contain pandemics through revitalized national and international institutions should be our shared goal. However, if U.S. agencies become less able to respond to pandemics, leading institutions from other nations, such as Institut Pasteur and the National Institute of Health and Medical Research in France, the Wellcome Trust and London School of Hygiene and Tropical Medicine in the UK, and nongovernmental organizations (NGOs have done instrumental research and response work in previous pandemics), would need to step in to fill the void. There is no border wall against disease. **Pandemics are an existential threat on par with climate change and nuclear conflict**. We are at a **critical crossroads**, where we must either take the steps needed to prepare for this threat or become even more vulnerable. **It is only a matter of time before we are hit by a deadlier, more contagious pandemic.** Will we be ready?