# Meadows Round 1 - Neg

## NATIVE PATENTS PIC

#### Text: The member nations of the World Trade Organization should reduce intellectual property protections for medicines, but should maintain patent rights for medicines when owned by Native American tribes.

#### Native patent rights are justified under sovereign immunity. Tribes utilize medical patents to level the playing field- the Allergan case proves.

Morinville 17

(Paul Morinville, 10-9-2017, the Founder and former President of U.S. Inventor, Inc., which is an inventor organization in Washington D.C. that advocates strong patent protection for inventors and startups. Paul has been as executive at multiple technology startups including computer hardware, enterprise middleware and video compression software in the U.S. and China, and now medical devices. "Native Americans Set to Save the Patent System," IPWatchdog, <https://www.ipwatchdog.com/2017/10/09/native-americans-set-save-patent-system/id=88871/>, JKS)

As readers of this blog are aware, there has been a great deal of publicity generated by the recent patent sale and assignment by Allergan to the St. Regis Mohawk Tribe. A transaction ostensibly targeting the America Invents Act and designed to avoid the “killing fields” of the Patent Trial and Appeals Board (PTAB). The irony should not go unnoticed that Native Americans who historically had their property and rights taken away by egregious and discriminatory action by the United States government, are now the very same people rescuing inventors who are today losing their property and rights to egregious and discriminatory action by the very same government. Indian tribes are acquiring patents and using tribal sovereign immunity to preclude unjustified takings of patents by the discriminatory and corrupt PTAB, thus saving inventors from losing their private property rights. Yet, this emerging business model by Native American tribes has proven to be controversial, with critics even going so far as to allege these are sham transactions. But interestingly, these very same critics didn’t seem to have any problem when the University of Florida (a public university of the state of Florida) asserted its sovereign immunity to preclude PTAB review of university-owned patents. Why is it now alleged that Native American tribes who are doing the very same thing – using their sovereign immunity to preclude PTAB review of their intellectual property – are engaging in inappropriate or fraudulent behavior or somehow gaming the system? Tribes are sovereign in a similar way that states are sovereign, but there are important differences. Tribal lands are held in trust by the federal government and thus cannot be collateralized for investment and development, and tribes do not have a tax base to speak of. So by treaty the majority of funding that runs tribal governments and supports their native members comes from the federal government. This federal funding and other programs are intended to help the tribes become economically independent. With these funds and programs, a few tribes have been able to start tribal businesses owned by the tribe to create an economic engine that can at least partially support the tribe. Overall, these tribal businesses are successful at bringing economic development and jobs to Indian Reservations. Most people only know about the casinos and tax free cigarette shops, but tribal businesses go far beyond those stereotypical businesses. Tribal businesses are involved in many sectors including electronics, oil & gas, manufacturing, distribution, logistics and much more. Many employ not only natives on the reservation but others across the country. Tribal businesses contribute millions of dollars to the economies of reservations and of the US. States, on the other hand, get their funding by taxing their people and some even attempt to tax the tribes in one way or another. I met recently with one such tribal enterprise in North Dakota, Mandaree Enterprises LLC, which is owned by the Three Affiliated Tribes of the Fort Berthold reservation, in order to gain a better understanding of tribal sovereign immunity in the context of intellectual property. Based on my discussions with the folks at Mandaree Enterprises, set forth below is an overview of how patent owners can partner with Native American tribes to create a level playing field with infringers while possibly avoiding the anti-inventor/anti-patent PTAB. It should be noted upfront that I’m not an attorney so you should seek your own independent legal advice and not rely on this article which is not intended to offer legal advice or substitute for obtaining the advice of legal counsel. Also, this article (due to space constraints) is necessarily incomplete in that it focuses on only one aspect of this type of structure, but there are many other benefits of teaming up with a tribe.

#### Tribal patents make the licensing system more efficient and fair. Preserving sovereign immunity ensures Native Nations can develop their local economies in underserved areas.

Morinville 17

(Paul Morinville, 10-9-2017, the Founder and former President of U.S. Inventor, Inc., which is an inventor organization in Washington D.C. that advocates strong patent protection for inventors and startups. Paul has been as executive at multiple technology startups including computer hardware, enterprise middleware and video compression software in the U.S. and China, and now medical devices. "Native Americans Set to Save the Patent System," IPWatchdog, <https://www.ipwatchdog.com/2017/10/09/native-americans-set-save-patent-system/id=88871/>, JKS)

Isn’t it paradoxical that Native Americans who suffered so many injustices by losing their cultural identity, property and much more are the very same people that could bring about an end to the injustices being perpetrated against American inventors and their property rights by the current patent system in this country? But back to my initial question: Why are so many critics calling this arrangement a sham? Senator McCaskill (D-MO) seems to think that Indian Tribes asserting sovereign immunity is a sham and she has introduced legislation that would end tribal sovereignty as it applies to patent ownership. This raises a real and serious question: Why should a university be allowed sovereign immunity while denying sovereign immunity to a Indian tribes? Why should it be illegal for Native American tribes to participate in commerce as sovereign nations just as we agreed to in hundreds of treaties — the same treaties we have so often broken to the peril of Native Americans. If the tribes offer a way to make patent licensing more efficient, more productive, and more fair, and that also alleviates the courts of their already overworked dockets, why not allow it? Why not go the other way and eliminate the PTAB and restrict DJ actions? All of the very positive benefits that tribal sovereign immunity creates for inventors and small entities aside, it immeasurably helps down-trodden American Indian tribes develop their economies without taxing already poor and underprivileged Native Americans or burdening the federal government by paying subsidies. Are critics decrying partnering with American Indian tribes because it increases the chances that an inventor will achieve a reasonable outcome and return for the hard work and investment that went into their invention? Or are critics alleging it is a sham because infringers can no longer use all of the frivolous and unfair tools at their disposal in litigation? Or is the real reason that it is an American Indian tribe?

#### Any attempt to deny Native Nations their sovereign right to patents is emblematic of racist paternalism.

Gulliford 18

(Michael Gulliford is the Founder and a Managing Principal of Soryn IP Group, a patent advisory and finance firm headquartered in New York City that closed almost $140 million in patent deals in 2017. In addition, Soryn Capital, manages one of the largest funds in the U.S. dedicated to patent litigation finance. Prior to founding Soryn, Michael was a partner in the Intellectual Property group at Kirkland & Ellis LLP. 6-10-18, "Guest Editorial: Yes, Native Americans and Patents Do Go Together," Patently-O, <https://patentlyo.com/patent/2018/06/editorial-americans-together.html>, JKS)

#2 – No One Gives Native Americans Credit

The most recited narrative of the deal is that Allergan “rented” the Saint Regis Mohawk Tribe’s sovereign immunity. This point of view is based on racism at worse and paternalism at best. Most can’t fathom that an Indian tribe, itself no stranger to devastating property loss, could be sophisticated enough to appreciate how recent changes to the U.S. patent system have failed innovators, or to have done a deal to right such wrongs. But as I’m sure Allergan quickly appreciated when it visited the Tribe’s reservation, the Saint Regis Mohawk Tribe challenges convention. Its leadership is highly sophisticated and entrepreneurial. With limited powers of taxation, and the enormous burden of providing healthcare, addiction treatment, housing and education to its people, the Saint Regis Mohawk Tribe innovates to create revenue. The Tribe’s broadband company “Mohawk Networks,” is solving the “last mile” problem in regions of Northern New York by building and expanding its high-speed fiber network. While local auto and aluminum factories have shut down, costing local jobs, the Tribe invested heavily in a new soy bean processing plant located close to the Tribe’s reservation. The plant will support farms that supply the State’s Greek yogurt industry, and create needed jobs. The Tribe’s Office of Technology, Research and Patents, founded well before the Allergan deal, is pursuing a host of patent and commercialization initiatives. All are examples of the Tribe’s desire to steer away from casino gaming as its sole revenue source. And there is more to come.

#### We meet – the CP text is the advocate, I’m advocating for it, and we have cards explaining the importance of Native-owned patents as being the exception based on sovereign immunity.

#### Even still, solvency advocates aren’t a reason to reject the team or counterplan—

#### 1] There’s no brightline for you determine what counts as a legit solvency advocate which means their interpretation is comparatively worse because it’s infinitely regressive and allows debaters to arbitrarily decide what meets the threshold of a solvency advocate

#### 2] Neg flex outweighs—the aff gets 1st and last speech and gets to control the rest of this debate—the neg should get flexibility to equalize the playing field

#### 3] The aff doesn’t have a coherent solvency advocate either! Look at their evidence- it doesn’t say EXACTLY what the plan does, which proves how arbitrary their interp is

#### 4] Better for education—forces the aff to think on their feet to come up with good responses—also means we learn more about different policy mechanisms within the government, which internal link turns their offense

#### 5] Negation theory- the neg’s role is to negate the aff— the counterplan is an example of that

#### PICs are good

#### Our offense —

#### 1] Fair side balance – PICs offset advantage of case selection, literature biased advantages, and the inherent problems with the status quo. The aff gets infinite prep to write the most strategic AC. No author defends every restriction so its important for the negative to PIC which advocacy is the most strategic otherwise they’ll get hosed by a well written aff every time.

#### 2] Depth of Education – focusing on intricacies highlights comparative argument quality as well as moving past a vague “good/bad” focus. Prefer in depth strategies over generics that don’t generate clash

#### 3] Intelligent Plan Writing and AFF Research – AFFs are forced to defend and research every part of the plan through in-depth analysis. No pics guarantees important arguments will be pushed aside in favor of high magnitude nonsense

#### 4] Key to CP Ground – virtually every CP could be classified as a PIC and in the real world PICS are an important part of legislative deliberation- if Biden pushes tax cuts for the poor republicans can counter with tax cuts for the rich

#### 5] Real world education – when policies have problems no one scraps it entirely – people propose small reforms that fix the problems and identify flaws – the devil is in the details in policymaking.

propose the curtailment of his own power. One PIC which has been misinterpreted, had the President veto the plan instead of proposing the plan. The key to this strategy was a net benefit to a veto over cooperation that had to be won by the negative. This example demonstrates how the PIC could be crucial for the negative as affirmatives write their plans to avoid negative arguments.

## Innovation DA

**1NC – Disease**

**Pharma industry innovation is up but profit margins are razor thin**

**Young 9-14-21**

(Peter, CEO and President of Young & Partners, and a member of Pharm Exec’s Editorial Advisory Board. https://www.pharmexec.com/view/fishawack-health-appoints-new-ceo-jonathan-koch)

Business. The business outlook for pharma manufacturers is positive with regard to drug development and the **volume and quality of promising drugs in the pipeline**. The industry’s innovations in drug development and productivity **have improved**. Combined with indirect R&D pursuits through the biotech industry, overall development activity has been **strong and should continue to be strong**. There has been a shift in emphasis toward orphan drugs, oncology therapies, new innovations such as mRNA, gene therapy, CAR-T, immune system solutions, CRISPR, etc. The current pandemic has been a plus for the reputation of the industry, but a negative with regard to the ability to execute clinical trials and to maintain industry supply chains. Generic pharma companies are **under severe profit pressures** and will continue to consolidate, cut costs, and try to push selectively into higher value and more protected product areas. They are under intense pricing and competitive pressure.

**Strong IP protection spurs innovation by encouraging risk-taking and incentivizing knowledge sharing -- prefer statistical analysis of multiple studies**

**Ezell and Cory 19** [Stephen Ezell, vice president & global innovation policy @ ITIF, BS Georgetown School of Foreign Service. Nigel Cory, associate director covering trade policy @ ITIF, MA public policy @ Georgetown. "The Way Forward for Intellectual Property Internationally," Information Technology & Innovation Foundation, 4-25-2019, accessed 8-25-2021, https://itif.org/publications/2019/04/25/way-forward-intellectual-property-internationally] HWIC

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 counties 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. Counties 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. 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

**COVID exceptions erode IP policies broadly.**

**PRMA 21** The Pharmaceutical Research and Manufacturers of America SPECIAL 301 SUBMISSION 2021 <https://phrma.org/-/media/Project/PhRMA/PhRMA-Org/PhRMA-Org/PDF/P-R/PhRMA_2021-Special-301_Review_Comment-1.pdf> SM

Moreover, some countries are using the COVID-19 pandemic opportunistically to advance longstanding industrial policies to further erode intellectual property policies. India and South Africa are key sponsors of a proposal at the WTO TRIPS Council calling to eliminate for an indefinite term certain WTO obligations to grant IP on a wide range of technologies related to COVID-19. The proposal marks a significant escalation in anti-IP global activism and will further polarize legitimate conversations on countries’ engagement to combat the pandemic. The proposal will do nothing to address the production and distribution challenges for making COVID-19 vaccines globally available. If anything the proposals threaten to undermine the ability to respond to another pandemic, and will inevitably affect IP discussions in countries around the world.

**Biopharmaceutical innovation is key to prevent future pandemics and bioterror**

**Marjanovic and Feijao 20** [Sonja Marjanovic Ph.D., Judge Business School, University of Cambridge. Carolina Feijao, Ph.D. in biochemistry, University of Cambridge; M.Sc. in quantitative biology, Imperial College London; B.Sc. in biology, University of Lisbon. "How to Best Enable Pharma Innovation Beyond the COVID-19 Crisis," RAND Corporation, 05-2020, accessed 8-8-2021, https://www.rand.org/pubs/perspectives/PEA407-1.html] HWIC

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

**That causes extinction, which outweighs.**

**Millett & Snyder-Beattie ‘17**. Millett, Ph.D., Senior Research Fellow, Future of Humanity Institute, University of Oxford; and Snyder-Beattie, M.S., Director of Research, Future of Humanity Institute, University of Oxford. 08-01-2017. “Existential Risk and Cost-Effective Biosecurity,” Health Security, 15(4), PubMed

In the decades to come, advanced bioweapons could **threaten human existence**. Although the **probability** of human extinction from bioweapons **may** be low, the **expected value** of **reducing** the risk could **still** be **large**, since such risks jeopardize the existence of **all future generations**. We provide an overview of biotechnological extinction risk, make some rough initial estimates for how severe the risks might be, and compare the cost-effectiveness of reducing these extinction-level risks with existing biosecurity work. We find that reducing human extinction risk can be more cost-effective than reducing smaller-scale risks, even when using conservative estimates. This suggests that the risks are not low enough to ignore and that more ought to be done to prevent the worst-case scenarios. How worthwhile is it spending resources to study and mitigate the chance of human extinction from biological risks? The risks of such a catastrophe are presumably low, so a skeptic might argue that addressing such risks would be a waste of scarce resources. In this article, we investigate this position using a cost-effectiveness approach and ultimately conclude that the expected value of reducing these risks is large, especially since such risks jeopardize the existence of all future human lives. **Historically, disease events have been responsible for the greatest death tolls** on humanity. The 1918 flu was responsible for more than 50 million deaths,1 while smallpox killed perhaps 10 times that many in the 20th century alone.2 The Black Death was responsible for killing over 25% of the European population,3 while other pandemics, such as the plague of Justinian, are thought to have killed 25 million in the 6th century—constituting over 10% of the world's population at the time.4 It is an open question whether a future pandemic could result in outright human extinction or the irreversible collapse of civilization. A skeptic would have many good reasons to think that existential risk from disease is unlikely. Such a disease would need to spread worldwide to **remote populations**, overcome **rare genetic resistances**, and **evade detection**, cures, and **countermeasures**. Even evolution itself may work in humanity's favor: **Virulence and transmission is often a trade-off**, and so **evolutionary pressures** could push against maximally lethal wild-type pathogens.5,6 While these arguments point to a very small risk of human extinction, they **do not rule** the possibility **out** entirely. Although rare, there are recorded instances of **species going extinct due to disease**—primarily in amphibians, but also in 1 mammalian species of rat on Christmas Island.7,8 There are also **historical examples of large human populations being almost entirely wiped out** by disease, especially when multiple diseases were simultaneously introduced into a population without immunity. The most striking examples of total population collapse include **native American tribes** exposed to European diseases, such as the Massachusett (86% loss of population), Quiripi-Unquachog (95% loss of population), and the Western Abenaki (which suffered a staggering 98% loss of population).9 In the modern context, no single disease currently exists that combines the worst-case levels of transmissibility, lethality, resistance to countermeasures, and global reach. But **many diseases are proof** of principle that **each worst-case attribute can be realized independently**. For example, some diseases exhibit nearly a 100% case fatality ratio in the absence of treatment, such as rabies or septicemic plague. Other diseases have a track record of spreading to virtually every human community worldwide, such as the 1918 flu,10 and seroprevalence studies indicate that other pathogens, such as chickenpox and HSV-1, can successfully reach over 95% of a population.11,12 Under optimal virulence theory, **natural evolution** would be an **unlikely** source for pathogens with the **highest possible levels of transmissibility, virulence, and global reach**. But **advances in biotech**nology might allow the creation of diseases that **combine such traits**. Recent controversy has **already emerged** over a number of **scientific experiments** that resulted in viruses with enhanced **transmissibility**, **lethality**, and/or the ability to overcome **therapeutics**.13-17 Other experiments demonstrated that mousepox could be modified to have a 100% case fatality rate and render a vaccine ineffective.18 In addition to transmissibility and lethality, studies have shown that other disease traits, such as incubation time, environmental survival, and available vectors, could be modified as well.19-21 Although these experiments had scientific merit and were not conducted with malicious intent, their implications are still worrying. This is especially true given that there is also a **long historical track record** of**state-run bioweapon research** applying cutting-edge science and technology to design agents not previously seen in nature. The Soviet bioweapons program developed agents with traits such as enhanced virulence, resistance to therapies, greater environmental resilience, increased difficulty to diagnose or treat, and which caused unexpected disease presentations and outcomes.22 Delivery capabilities have also been subject to the cutting edge of technical development, with Canadian, US, and UK bioweapon efforts playing a critical role in developing the discipline of aerobiology.23,24 While there is no evidence of state-run bioweapons programs directly attempting to develop or deploy bioweapons that would pose an existential risk, the logic of deterrence and **m**utually **a**ssured **d**estruction could create such incentives in more unstable political environments or following a breakdown of the Biological Weapons Convention.25 The **possibility of a war** between great powers could also increase the pressure to use such weapons—during the World Wars, bioweapons were used across multiple continents, with Germany targeting animals in WWI,26 and Japan using plague to cause an epidemic in China during WWII.27