### 1

#### CP Text: A just government should recognize the unconditional right of non-police workers to strike, abolishing police unions.

#### The aff makes police collective bargaining worse and gives more power to police unions.

Andrew **Grim, 20** Ph.D. candidate in history at the University of Massachusetts Amherst, is at work on a dissertation on anti-police brutality activism in post-WWII Newark

- ("What is The Blue Flue and How Has It Increased Police Power," Washington Post, 7-1-2020, 11-2-2021https://www.washingtonpost.com/outlook/2020/07/01/what-is-blue-flu-how-has-it-increased-police-power/)//AW

This weekend, officers from the New York City Police Department are rumored to be planning a walkout to protest calls to defund the police. This builds on a similar tactic used by police in Atlanta less than a month ago. On June 16, Fulton County District Attorney, Paul L. Howard Jr. announced that Garrett Rolfe, the Atlanta police officer who fatally shot Rayshard Brooks, would face charges of felony murder and aggravated assault. That night, scores of Atlanta Police Department officers caught the “blue flu,” calling out sick en masse to protest the charges against Rolfe. Such walkouts constitute, in effect, illegal strikes — laws in all 50 states prohibit police strikes. Yet, there is nothing new about the blue flu. It is a strategy long employed by police unions and rank-and-file officers during contract negotiations, disputes over reforms and, like in Atlanta, in response to disciplinary action against individual officers. The intent is to dramatize police disputes with municipal government and rally the citizenry to their side. But the result of such protests matter deeply as we consider police reform today. Historically, blue flu strikes have helped expand police power, ultimately limiting the ability of city governments to reform, constrain or conduct oversight over the police. They allow the police to leverage public fear of crime to extract concessions from municipalities.

#### Police unions use collective bargaining to reinforce systems of racism and violence. Clark ‘19

Paul F. Clark [School Director and Professor of Labor and Employment Relations, Penn State], 10-10-2019, "Why police unions are not part of the American labor movement," Conversation, [https://theconversation.com/why-police-unions-are-not-part-of-the-american-labor-movement-142538 //accessed 10/20/2021](https://theconversation.com/why-police-unions-are-not-part-of-the-american-labor-movement-142538%20//accessed%2010/20/2021) //marlborough jh

In the wake of George Floyd’s death at the hands of a Minneapolis police officer, news reports have suggested that [police unions bear some of the responsibility](https://www.salon.com/2020/06/27/police-unions-blamed-for-rise-in-fatal-shootings-even-as-crime-plummeted/) for the [violence perpetrated against African Americans](https://www.nytimes.com/2020/05/30/us/derek-chauvin-george-floyd.html). ¶Critics have assailed these unions for [protecting officers who have abused their authority](https://www.washingtonpost.com/outlook/2020/06/09/limits-when-police-can-use-force-is-better-solution-than-banning-police-unions/). Derek Chauvin, the former police officer facing [second-degree murder charges for Floyd’s death](https://www.npr.org/2020/06/03/868910542/chauvin-and-3-former-officers-face-new-charges-over-george-floyds-death), had nearly [20 complaints filed against him during his career](https://www.mercurynews.com/2020/05/30/minneapolis-officers-work-personal-background-detailed-2/) but only received two letters of reprimand. ¶Many people who support labor unions in principle, who view them as a countervailing force against the power of employers, have only recently [come to view police unions as problematic](https://www.latimes.com/politics/story/2020-06-15/police-unions-george-floyd-reform) – as entities that [perpetuate a culture of racism and violence](https://www.newyorker.com/news/news-desk/how-police-union-power-helped-increase-abuses). But this sentiment reverberates through the history of the U.S. labor movement. As a [labor scholar](https://ler.la.psu.edu/people/pfc2) who has [written about unions](https://theconversation.com/essential-us-workers-often-lack-sick-leave-and-health-care-benefits-taken-for-granted-in-most-other-countries-136802) for [decades](https://onlinelibrary.wiley.com/doi/full/10.1111/bjir.12526), I think this viewpoint can be explained by the fact that police unions differ fundamentally from almost all trade unions in America. Foot soldiers for the status quo For many veterans of the labor movement, [police have been on the wrong side](https://plsonline.eku.edu/insidelook/history-policing-united-states-part-3) of the centuries-old struggle between workers and employers. [Rather than side with other members of the working class](https://www.businessinsider.com/mayhem-in-madison-police-remove-protesters-lockdown-capitol-2011-3), police have used their legal authority to protect businesses and private property, enforcing laws viewed by many as anti-union. The strain between law enforcement and labor goes back to the origins of [American unions in the mid 19th century](https://plsonline.eku.edu/insidelook/history-policing-united-states-part-3). Workers formed unions to fight for wage increases, reduced working hours and humane working conditions. For employers, this was an attack on the existing societal power structure. They enlisted the government as the defender of capital and property rights, and [police officers were the foot soldiers](http://america.aljazeera.com/articles/2014/12/22/police-unions-havealwaysbeenalabormovementapart.html) who defended the status quo. ¶When workers managed to form unions, companies called on local police to disperse union gatherings, marches and picket lines, using [violence and mass arrests to break the will of strikers](https://www.smithsonianmag.com/history/how-1897-massacre-pennsylvania-coal-miners-morphed-galvanizing-crisis-forgotten-history-180971695/). A narrow focus Police work is a fundamentally conservative act. And police officers tend to be politically conservative and Republican. A poll of police [conducted in September 2016 by POLICE Magazine](https://www.policemag.com/342098/the-2016-police-presidential-poll) found that 84% of officers intended to vote for Donald Trump that November. And law enforcement unions like the Fraternal Order of Police, the International Union of Police Associations and the National Border Patrol Council [all endorsed Trump’s candidacy in 2016](https://theintercept.com/2016/10/09/police-unions-reject-charges-of-bias-find-a-hero-in-donald-trump/). This contrasts sharply with the 39% share of all [union voters who voted for Trump](https://www.wsj.com/articles/democrats-labor-to-stem-flow-of-union-voters-to-trump-11567422002) and the fact that every other union which made an [endorsement supported Hillary Clinton](https://justfacts.votesmart.org/candidate/evaluations/55463/hillary-clinton). Exclusively protecting the interests of their members, without consideration for other workers, also sets police unions apart from other labor groups. Yes, the first priority of any union is to fight for their members, but most other unions see that fight in the context of a [larger movement that fights for all workers](https://aflcio.org/what-unions-do/social-economic-justice). Police unions do not see themselves as [part of this movement](https://www.teenvogue.com/story/what-to-know-police-unions-labor-movement). With one exception – the [International Union of Police Associations](https://www.theguardian.com/us-news/2020/jun/11/police-unions-american-labor-movement-protest), which represents just [2.7% of American police](https://www.bjs.gov/content/pub/pdf/ftelea9716.pdf) – law enforcement unions are not affiliated with the AFL-CIO, the U.S. labor body that unites all unions. Alternative justice system A central concern with police unions is that they use collective bargaining to negotiate contracts that reduce police transparency and accountability. This allows officers who engage in excessive violence to [avoid the consequences of their actions](https://www.washingtonpost.com/business/2020/06/10/police-unions-violence-research-george-floyd/) and remain on the job. In a way, some police unions have created an [alternative justice system](https://www.theatlantic.com/politics/archive/2016/06/restorative-justice-police-violence/489221/) that prevents police departments and municipalities from disciplining or discharging officers who have committed crimes against the people they are sworn to serve. In Minneapolis, residents filed more than [2,600 misconduct complaints](https://www.wsj.com/articles/the-problem-with-police-unions-11591830984) against police officers between 2012 and 2020. But only 12 of those grievances resulted in discipline. The most significant [punishment any officer received was a 40-hour suspension](https://www.nytimes.com/2020/05/30/us/derek-chauvin-george-floyd.html). Besides collective bargaining, police have used the political process – including [candidate endorsements and lobbying](https://www.theguardian.com/us-news/2020/jun/23/police-unions-spending-policy-reform-chicago-new-york-la) – to secure local and state legislation that protects their members and quells efforts to provide greater police accountability. Police officers are a formidable political force because they represent [the principle of law and order](https://www.thedailybeast.com/the-gop-and-police-unions-a-love-story). Candidates endorsed by the police unions can claim they are the law and order candidate. Once these candidates win office, police unions have [significant leverage to lobby for policies](https://nymag.com/intelligencer/2020/06/george-floyd-protests-police-abuse-reform-qualified-immunity-polls.html) they support or block those they oppose. Because of this power, critics claim that police unions don’t feel accountable to the citizens they serve. An attorney who sued the Minneapolis Police Department on behalf of a Black resident who was [severely beaten by police officers](https://www.nytimes.com/2020/05/30/us/derek-chauvin-george-floyd.html) said that he is convinced that Minneapolis “officers think they don’t have to abide by their own training and rules when dealing with the public.” George Floyd’s death has raised serious concerns about the current role of police and police unions in our society. Several unions have demanded that the International Union of Police Associations be expelled from the U.S. labor federation. Other [unions oppose expulsion](https://www.nbcnews.com/politics/politics-news/national-labor-groups-mostly-close-ranks-defend-police-unions-n1231573). They argue that the labor movement can have a greater impact on a police union that is inside the “House of Labor.” In any case, there is a growing recognition that police unions differ significantly from other unions. And there is a growing acceptance that they are not part of the larger American labor movement but rather a narrowly focused group pursuing their own self-interests, often to the detriment of the nation at large.

### 2

#### Global tech innovation high now.

Mercury News et al 6/4 [Mercury News and East Bay Times Editorial Boards, June 4, 2021, “Editorial: How America can Win the Global Tech War” <https://www.mercurynews.com/2021/06/04/editorial-why-silicon-valley-needs-endless-frontier-bill/> //gord0]

The nation that wins the global tech race will dominate the 21st century. This has been true since the 1800s. Given the rapid pace of innovation and tech’s impact on our economy and defense capabilities in the last decade, there is ample evidence to suggest that the need for investment in tech research and development has never been greater. China has been closing the tech gap in recent years by making bold investments in tech with the intent of overtaking the United States. This is a tech war we cannot afford to lose. It’s imperative that Congress pass the Endless Frontier Act and authorize the biggest R&D tech investment in the United States since the Apollo years. Rep. Ro Khanna, D-Santa Clara, made a massive increase in science and technology investment a major part of his platform while campaigning for a seat in Congress in 2016. Now the co-author of the 600-page legislation is on the cusp of pushing through a bipartisan effort that has been years in the making. Khanna and his co-authors, Senate Majority Leader Chuck Schumer, D-N.Y., Sen. Todd Young, R-Ind., and Rep. Mike Gallagher, R-Wisc., are shepherding the bill through the Senate, which is expected to approve it sometime later this month. That would set up a reconciliation debate between the House and Senate that would determine the bill’s final language. The ultimate size of the investment is still very much up in the air. Khanna would like Congress to authorize $100 billion over a five-year period for critical advancements in artificial intelligence, biotechnology, cybersecurity, semiconductors and other cutting-edge technologies. The Senate is talking of knocking that number down to $50 billion or $75 billion. They should be reminded of China Premier Li Keqiang’s March announcement that China would increase its research and development spending by an additional 7% per year between 2021 and 2025. The United States still outspends China in R&D, spending $612 billion on research and development in 2019, compared to China’s $514 billion. But the gap is narrowing. At the turn of the century, China was only spending $33 billion a year on R&D, while the United States was spending nearly 10 times that amount. The bill would authorize 10 technology hubs throughout the nation designed to help build the infrastructure, manufacturing facilities and workforce needed to help meet the nation’s tech goals. Building tech centers throughout the United States should also create more support for the industry across the country. Tech’s image has taken a beating in recent years — the emergence of the term “Big Tech” is hardly a positive development — and the industry will need all the support it can muster in Congress. The United States continues to have a crucial tech edge over its competitors, most notably China. The only way we can hope to win the 21st century is to make significant investments in research and development that will spark the next wave of innovation.

#### Violent strike efforts are increasing – they slow innovation, specifically in the tech sector.

Hanasoge 16 [Chaithra; Senior Research Analyst, Market Researcher, Consumer Insights, Strategy Consulting; “The Union Strikes: The Good, the Bad and the Ugly,” Supply Wisdom; April/June 2016 (Doesn’t specifically say but this is the most recent event is cites); https://www.supplywisdom.com/resources/the-union-strikes-the-good-the-bad-and-the-ugly/]//SJWen

The result: Verizon conceded to several of the workers’ demands including hiring union workers, protection against outsourcing of call-center jobs, and employee benefits such as salary hikes and higher pension contributions, among others and thus bringing an end to the strike in June.

The repercussion: The strike witnessed several instances of social disorder, violence and clashes, ultimately calling for third party intervention (Secretary of Labor – Thomas Perez) to initiate negotiations between the parties. Also, as a result of the strike, Verizon reported lower than expected revenues in the second quarter of 2016.

Trade unions/ labor unions aren’t just this millennia’s product and has been in vogue since times immemorial. Unions, to ensure fairness to the working class, have gone on strike for better working conditions and employee benefits since the industrial revolution and are as strong today as they were last century. With the advent of technology and advancement in artificial intelligence, machines are grabbing the jobs which were once the bastion of the humans. So, questions that arise here are, what relevance do unions have in today’s work scenario? And, are the strikes organized by them avoidable?

As long as the concept of labor exists and employees feel that they are not receiving their fair share of dues, unions will exist and thrive. Union protests in most cases cause work stoppages, and in certain cases, disruption of law and order. Like in March 2016, public servants at Federal Government departments across Australia went on a series of strikes over failed pay negotiations, disrupting operations of many government departments for a few days.  Besides such direct effects, there are many indirect effects as well such as strained employee relations, slower work processes, lesser productivity and unnecessary legal hassles.

Also, union strikes can never be taken too lightly as they have prompted major overturn of decisions, on a few occasions. Besides the Verizon incident that was a crucial example of this, nationwide strikes were witnessed in India in March and April this year when the national government introduced reforms related to the withdrawal regulations and interest rate of employee provident fund, terming it as ‘anti-working class’. This compelled the government to withhold the reform for further review. In France, strike against labor law reforms in May turned violent, resulting in riots and significant damage to property. The incident prompted the government to consider modifications to the proposed reforms.

However, aside from employee concerns, such incidents are also determined by a number of other factors such as the country’s political scenario, economy, size of the overall workforce and the unions, history of unionization, labor laws, and culture. For example, it is a popular saying that the French are always on strike as per tradition (although recent statistics indicate a decline in frequency). In a communist government like China, strikes have steadily risen in number. In 2015, China Labor Bulletin (CLB), a Hong Kong-based workers’ rights group recorded 2,700 incidents of strikes and protests, compared to 1,300 incidents in 2014. Most of them have stemmed out of failure by the government to respect the basic rights of employees and address labor concerns.

Interestingly, unions have not been able to gain a strong foothold in the IT-BPO industry. While many countries do have a separate union to represent workers from the sector, incidents of strikes like Verizon have been relatively low.  However, workplace regulations, in addition to other factors mentioned could be a trigger for such incidents, even if on a smaller scale. For example, a recent survey that interviewed several BPO employees in India revealed that while forming a union in the BPO sector was difficult, irksome workplace regulations such as constant surveillance, irregular timings and incentives have prompted employees to express their resentment in smaller ways such as corruption of internal servers and so on.  Such risks are further enhanced in a city like Kolkata, which carries a strong trade union culture.

#### Victories like the aff mobilizes unions in the IT sector.

Vynck et al 21 [Gerrit De; Carleton University, BA in Journalism and Global Politics, tech reporter for The Washington Post. He writes about Google and the algorithms that increasingly shape society. He previously covered tech for seven years at Bloomberg News; Nitashu Tiku; Columbia University, BA in English, New York University, MA in Journalism, Washington Post's tech culture reporter based in San Francisco; Macalester College, BA in English, Columbia University, MS in Journalism, reporter for The Washington Post who is focused on technology coverage in the Pacific Northwest; “Six things to know about the latest efforts to bring unions to Big Tech,” The Washington Post; https://www.washingtonpost.com/technology/2021/01/26/tech-unions-explainer/]//SJWen

In response to tech company crackdowns and lobbying, gig workers have shifted their strategy to emphasize building worker-led movements and increasing their ranks, rather than focusing on employment status as the primary goal, says Veena Dubal, a law professor at the University of California Hastings College of the Law in San Francisco. The hope is that with President Biden in the White House and an even split in the Senate, legislators will mobilize at the federal level, through the NLRA or bills such as the PRO Act, to recognize gig worker collectives as real unions.

#### Technological innovation solves every existential threat – which outweighs.

Matthews 18 Dylan. Co-founder of Vox, citing Nick Beckstead @ Rutgers University. 10-26-2018. "How to help people millions of years from now." Vox. https://www.vox.com/future-perfect/2018/10/26/18023366/far-future-effective-altruism-existential-risk-doing-good

If you care about improving human lives, you should overwhelmingly care about those quadrillions of lives rather than the comparatively small number of people alive today. The 7.6 billion people now living, after all, amount to less than 0.003 percent of the population that will live in the future. It’s reasonable to suggest that those quadrillions of future people have, accordingly, hundreds of thousands of times more moral weight than those of us living here today do. That’s the basic argument behind Nick Beckstead’s 2013 Rutgers philosophy dissertation, “On the overwhelming importance of shaping the far future.” It’s a glorious mindfuck of a thesis, not least because Beckstead shows very convincingly that this is a conclusion any plausible moral view would reach. It’s not just something that weird utilitarians have to deal with. And Beckstead, to his considerable credit, walks the walk on this. He works at the Open Philanthropy Project on grants relating to the far future and runs a charitable fund for donors who want to prioritize the far future. And arguments from him and others have turned “long-termism” into a very vibrant, important strand of the effective altruism community. But what does prioritizing the far future even mean? The most literal thing it could mean is preventing human extinction, to ensure that the species persists as long as possible. For the long-term-focused effective altruists I know, that typically means identifying concrete threats to humanity’s continued existence — like unfriendly artificial intelligence, or a pandemic, or global warming/out of control geoengineering — and engaging in activities to prevent that specific eventuality. But in a set of slides he made in 2013, Beckstead makes a compelling case that while that’s certainly part of what caring about the far future entails, approaches that address specific threats to humanity (which he calls “targeted” approaches to the far future) have to complement “broad” approaches, where instead of trying to predict what’s going to kill us all, you just generally try to keep civilization running as best it can, so that it is, as a whole, well-equipped to deal with potential extinction events in the future, not just in 2030 or 2040 but in 3500 or 95000 or even 37 million. In other words, caring about the far future doesn’t mean just paying attention to low-probability risks of total annihilation; it also means acting on pressing needs now. For example: We’re going to be better prepared to prevent extinction from AI or a supervirus or global warming if society as a whole makes a lot of scientific progress. And a significant bottleneck there is that the vast majority of humanity doesn’t get high-enough-quality education to engage in scientific research, if they want to, which reduces the odds that we have enough trained scientists to come up with the breakthroughs we need as a civilization to survive and thrive. So maybe one of the best things we can do for the far future is to improve school systems — here and now — to harness the group economist Raj Chetty calls “lost Einsteins” (potential innovators who are thwarted by poverty and inequality in rich countries) and, more importantly, the hundreds of millions of kids in developing countries dealing with even worse education systems than those in depressed communities in the rich world. What if living ethically for the far future means living ethically now? Beckstead mentions some other broad, or very broad, ideas (these are all his descriptions): Help make computers faster so that people everywhere can work more efficiently Change intellectual property law so that technological innovation can happen more quickly Advocate for open borders so that people from poorly governed countries can move to better-governed countries and be more productive Meta-research: improve incentives and norms in academic work to better advance human knowledge Improve education Advocate for political party X to make future people have values more like political party X ”If you look at these areas (economic growth and technological progress, access to information, individual capability, social coordination, motives) a lot of everyday good works contribute,” Beckstead writes. “An implication of this is that a lot of everyday good works are good from a broad perspective, even though hardly anyone thinks explicitly in terms of far future standards.” Look at those examples again: It’s just a list of what normal altruistically motivated people, not effective altruism folks, generally do. Charities in the US love talking about the lost opportunities for innovation that poverty creates. Lots of smart people who want to make a difference become scientists, or try to work as teachers or on improving education policy, and lord knows there are plenty of people who become political party operatives out of a conviction that the moral consequences of the party’s platform are good. All of which is to say: Maybe effective altruists aren’t that special, or at least maybe we don’t have access to that many specific and weird conclusions about how best to help the world. If the far future is what matters, and generally trying to make the world work better is among the best ways to help the far future, then effective altruism just becomes plain ol’ do-goodery.

### 3

#### Nurse strikes devastates hospitals

**Wright 10** Sarah H. Wright July 2010 "Evidence on the Effects of Nurses' Strikes" <https://www.nber.org/digest/jul10/evidence-effects-nurses-strikes> (Researcher at National Bureau of Economic Research)

U.S. hospitals were excluded from collective bargaining laws for three decades longer than other sectors because of fears **that strikes by nurses might imperil patients' health**. Today, while unionization has been declining in general, it is growing rapidly in hospitals, with the number of unionized workers rising from 679,000 in 1990 to nearly one million in 2008. In Do Strikes Kill? Evidence from New York State (NBER Working Paper No. 15855), co-authors Jonathan Gruber and Samuel Kleiner carefully examine the effects of nursing strikes on patient care and outcomes. The researchers match data on nurses' strikes in New York State from 1984 to 2004 to data on hospital discharges, including information on treatment intensity, patient mortality, and hospital readmission. They conclude that nurses' strikes were **costly to hospital patients**: in-hospital mortality **increased by 19.4 percent** and hospital readmissions **increased by 6.5 percen**t for patients admitted during a strike. Among their sample of 38,228 such patients, an estimated **138 more individuals died than would have without a stri**ke, and 344 more patients were readmitted to the hospital than if there had been no strike. "Hospitals functioning during nurses' strikes **do so at a lower quality of patient care,"** they write. Still, at hospitals experiencing strikes, the measures of treatment intensity -- that is, the length of hospital stay and the number of procedures performed during the patient's stay -- show no significant differences between striking and non-striking periods. Patients appear to receive the same intensity of care during union work stoppages as during normal hospital operations. Thus, the poor outcomes associated with strikes suggest that they might reduce hospital productivity. These poor health outcomes increased for both emergency and non-emergency hospital patients, even as admissions of both groups decreased by about 28 percent at hospitals with strikes. The poor health outcomes were not apparent either before or after the strike in the striking hospitals, suggesting that they are attributable to the strike itself. And, the poor health outcomes do not appear to do be due to different types of patients being admitted during strike periods, because patients admitted during a strike are very similar to those admitted during other periods. Hiring replacement workers apparently does not help: hospitals that hired replacement workers **performed no better** during strikes than those that did not hire substitute employees. In each case, patients with conditions that required intensive nursing were more likely to fare worse in the presence of nurses' strikes.

#### Hospitals are the critical internal link for pandemic preparedness.

**Al Thobaity 20**, Abdullelah, and Farhan Alshammari. "Nurses on the frontline against the COVID-19 pandemic: an Integrative review." Dubai Medical Journal 3.3 (2020): 87-92. (Associate Professor of Nursing at Taif University)

The majority of infected or symptomatic people seek medical treatment in medical facilities, particularly hospitals, as a high number of cases, especially those in critical condition, will have an impact on hospitals [4]. The concept of hospital resilience in disaster situations is defined as the ability to recover from the damage caused by huge disturbances quickly [2]. The resilience of hospitals to pandemic cases depends on the preparedness of the institutions, and not all hospitals have the same resilience. A lower resilience will affect the **sustainability of the health services**. This also affects healthcare providers such as doctors, nurses, and allied health professionals [5, 6]. Despite the impact on healthcare providers, excellent management of a pandemic depends on the level of **preparedness of healthcare providers, including nurses**. This means that if it was impossible to be ready before a crisis or disaster, responsible people will do all but the impossible to save lives.

#### New Pandemics are deadlier and faster are coming – COVID is just the beginning

**Antonelli 20** Ashley Fuoco Antonelli 5-15-2020 <https://www.advisory.com/daily-briefing/2020/05/15/weekly-line> "Weekly line: Why deadly disease outbreaks could become more common—even after Covid-19" (Associate Editor — American Health Line)

While the new coronavirus pandemic suddenly took the world by storm, the truth is public health experts for years have warned that a virus similar to the new coronavirus would cause the next pandemic—and they say **deadly infectious disease outbreaks could become more common**. Infectious disease experts are always on the lookout for the next pandemic, and in a report published two years ago, researchers from the Johns Hopkins Bloomberg School of Public Health **predicted that the pathogen most likely to cause the next pandemic would be a virus similar to the common cold**. Specifically, the researchers predicted that the pathogen at fault for the next pandemic would be: A microbe for which people have not yet **developed immunities**, meaning that a large portion of the human population would be susceptible to infection; Contagious during the so-called "incubation period"—the time when people are infected with a pathogen but are not yet showing symptoms of the infection or are showing only mild symptoms; and Resistant to any known prevention or treatment methods. The researchers also concluded that such a pathogen would have a "low but significant" fatality rate, meaning the pathogen wouldn't kill human hosts fast enough to inhibit its spread. As **Amesh Adalja**—a senior scholar at the Johns Hopkins Center for Health Security, who led the report—told Live Science's Rachael Rettner at the time, "**It just has to make a lot of people sick" to disrupt society**. The researchers said RNA viruses—which include the common cold, influenza, and severe acute respiratory syndrome (or SARS, which is caused by a type of coronavirus)—fit that bill. And even though we had a good bit of experience dealing with common RNA viruses like the flu, Adalja at the time told Rettner that there were "a whole host of viral families that get very little attention when it comes to pandemic preparedness." Not even two years later, the new coronavirus, which causes Covid-19, emerged and quickly spread throughout the world, reaching pandemic status in just a few months. To date, officials have reported more than 4.4 million cases of Covid-19 and 302,160 deaths tied to the new coronavirus globally. In the United States, the number of reported Covid-19 cases has reached more than 1.4 million and the number of reported deaths tied to the new coronavirus has risen to nearly 86,000 in just over three months. Although public health experts had warned about the likelihood of a respiratory-borne RNA virus causing the next global pandemic, many say the world was largely unprepared to handle this type of infectious disease outbreak. And as concerning as that revelation may be on its own, **perhaps even more worrisome is that public health experts predict life-threatening infectious disease outbreaks are likely to become more common—meaning we could be susceptible to another pandemic in the future**. Why experts think deadly infectious disease outbreaks could become more common As the Los Angeles Times's Joshua Emerson Smith notes, infectious disease experts for more than ten years now have noted that "[o]utbreaks of dangerous new diseases with the potential to become pandemics have been on the rise—from HIV to swine flu to SARS to Ebola." For instance, a report published in Nature in 2008 found that **the number of emerging infectious disease events that occurred in the 1990s was more than three times higher than it was in the 1940s**. Many experts believe the recent increase in infectious disease outbreaks is tied to human behaviors that disrupt the environment, "such as **deforestation and poaching**," which have led "to increased contact between highly mobile, urbanized human populations and wild animals," Emerson Smith writes. In the 2008 report, for example, researchers noted that about 60% of 355 emerging infectious disease events that occurred over a 50-year period could be largely linked to wild animals, livestock, and, to a lesser extent, pets. Now, researchers believe the new coronavirus first jumped to humans from animals at a wildlife market in Wuhan, China. Along those same lines, some experts have argued that global climate change has driven an increase in infectious diseases—and could continue to do so. A federally mandated report released by the U.S. Global Change Research Program in 2018 warned that warmer temperatures could expand the geographic range covered by disease-carrying insects and pests, which could result in more Americans being exposed to ticks carrying Lyme disease and mosquitos carrying the dengue, West Nile, and Zika viruses. And experts now say continued warming in global temperatures, deforestation, and other environmentally disruptive behaviors have broadened that risk by bringing more people into contact with disease-carrying animals. Further, experts note that infectious diseases today are able to spread much faster and farther than they could decades ago because of increasing globalization and travel. While some have suggested the Covid-19 pandemic could stifle that trend, others argue globalization is likely to continue—meaning so could infectious diseases' far spread.

#### Future pandemics will cause extinction – it only takes one ‘super-spreader’ – US prevention is key

**Bar-Yam 16** Yaneer Bar-Yam 7-3-2016 “Transition to extinction: Pandemics in a connected world” <http://necsi.edu/research/social/pandemics/transition> (Professor and President, New England Complex System Institute; PhD in Physics, MIT)

Watch as one of the more aggressive—brighter red — strains rapidly expands. After a time it goes extinct leaving a black region. Why does it go extinct? The answer is that it spreads so rapidly that it kills the hosts around it. Without new hosts to infect it then dies out itself. That the rapidly spreading pathogens die out has important implications for evolutionary research which we have talked about elsewhere [1–7]. In the research I want to discuss here, **what we were interested in is the effect of adding long range transportation** [8]. **This includes natural means of dispersal as well as unintentional dispersal by humans**, **like adding airplane routes**, which is being done by real world airlines (Figure 2). **When we introduce long range transportation into the model, the success of more aggressive strains changes. They can use the long range transportation to find new hosts and escape local extinction**. Figure 3 shows that **the more transportation routes introduced into the model, the more higher aggressive pathogens are able to survive and spread**. **As we add more long range transportation, there is a critical point at which pathogens become so aggressive that the entire host population dies**. **The pathogens die at the same time, but that is not exactly a consolation to the hosts. We call this** the phase **transition to extinction** (Figure 4). **With increasing levels of global transportation, human civilization may be approaching such a critical threshold.** In the paper we wrote in 2006 about the dangers of global transportation for pathogen evolution and pandemics [8], we mentioned the risk from Ebola. Ebola is a horrendous disease that was present only in isolated villages in Africa. It was far away from the rest of the world only because of that isolation. Since Africa was developing, it was only a matter of time before it reached population centers and airports. While the model is about evolution, it is really about which pathogens will be found in a system that is highly connected, and Ebola can spread in a highly connected world. The traditional approach to public health uses historical evidence analyzed statistically to assess the potential impacts of a disease. As a result, many were surprised by the spread of Ebola through West Africa in 2014. **As the connectivity of the world increases, past experience is not a good guide to future events. A key point about the phase transition to extinction is its suddenness**. **Even a system that seems stable, can be destabilized by a few more long-range connections, and connectivity is continuing to increase.** So how close are we to the tipping point? We don’t know but it would be good to find out before it happens. While Ebola ravaged three countries in West Africa, it only resulted in a handful of cases outside that region. One possible reason is that many of the airlines that fly to west Africa stopped or reduced flights during the epidemic [9]. In the absence of a clear connection, public health authorities who downplayed the dangers of the epidemic spreading to the West might seem to be vindicated. As with the choice of airlines to stop flying to west Africa, our analysis didn’t take into consideration how people respond to epidemics. It does tell us what the outcome will be unless we respond fast enough and well enough to stop the spread of future diseases, which may not be the same as the ones we saw in the past. **As the world becomes more connected, the dangers increase.** Are people in western countries safe because of higher quality health systems? **Countries like the U.S. have highly skewed networks of social interactions with some very highly connected individuals that can be “superspreaders.”** The chances of such an individual becoming infected may be low but **events like a mass outbreak pose a much greater risk** if they do happen. **If a sick food service worker in an airport infects 100 passengers, or a contagion event happens in mass transportation, an outbreak could very well prove unstoppable**.

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