## 1 90

#### Interpretation – the aff may not defend that a just government ought to recognize the right to strike for a subset of workers and governments

#### 1. Workers is a generic bare plural

Nebel 20 [Jake Nebel is an assistant professor of philosophy at the University of Southern California and executive director of Victory Briefs. He writes a lot of this stuff lol – duh.] “Indefinite Singular Generics in Debate” Victory Briefs, 19 August 2020. no url AG

I agree that if “a democracy” in the resolution just meant “one or more democracy,” then a country-specific affirmative could be topical. But, as I will explain in this topic analysis, that isn’t what “a democracy” means in the resolution. To see why, we first need to back up a bit and review (or learn) the idea of generic generalizations.

The most common way of expressing a generic in English is through a *bare plural*. A bare plural is a plural noun phrase, like “dogs” and “cats,” that lacks an overt determiner. (A determiner is a word that tells us which or how many: determiners include quantifier words like “all,” “some,” and “most,” demonstratives like “this” and “those,” posses- sives like “mine” and “its,” and so on.) LD resolutions often contain bare plurals, and that is the most common clue to their genericity.

We have already seen some examples of generics that are not bare plurals: “A whale is a mammal,” “A beaver builds dams,” and “The woolly mammoth is extinct.” The first two examples use indefinite singulars—singular nouns preceded by the indefinite article “a”—and the third is a definite singular since it is preceded by the definite article “the.” Generics can also be expressed with bare singulars (“Syrup is viscous”) and even verbs (as we’ll see later on). The resolution’s “a democracy” is an indefinite singular, and so it very well might be—and, as we’ll soon see, is—generic.

But it is also important to keep in mind that, just as not all generics are bare plurals, not all bare plurals are generic. “Dogs are barking” is true as long as some dogs are barking. Bare plurals can be used in particular ways to express existential statements. The key question for any given debate resolution that contains a bare plural is whether that occurrence of the bare plural is generic or existential.

The same is true of indefinite singulars. As debaters will be quick to point out, some uses of the indefinite singular really do mean “some” or “one or more”: “A cat is on the mat” is clearly not a generic generalization about cats; it’s true as long as some cat is on the mat. The question is whether the indefinite singular “a democracy” is existential or generic in the resolution.

Now, my own view is that, if we understand the difference between existential and generic statements, and if we approach the question impartially, without any invest- ment in one side of the debate, we can almost always just tell which reading is correct just by thinking about it. It is clear that “In a democracy, voting ought to be compul- sory” doesn’t mean “There is one or more democracy in which voting ought to be com- pulsory.” I don’t think a fancy argument should be required to show this any more than a fancy argument should be required to show that “A duck doesn’t lay eggs” is a generic—a false one because ducks do lay eggs, even though some ducks (namely males) don’t. And if a debater contests this by insisting that “a democracy” is existen- tial, the judge should be willing to resolve competing claims by, well, judging—that is, by using her judgment. Contesting a claim by insisting on its negation or demanding justification doesn’t put any obligation on the judge to be neutral about it. (Otherwise the negative could make every debate irresolvable by just insisting on the negation of every statement in the affirmative speeches.) Even if the insistence is backed by some sort of argument, we can reasonably reject an argument if we know its conclusion to be false, even if we are not in a position to know exactly where the argument goes wrong. Particularly in matters of logic and language, speakers have more direct knowledge of particular cases (e.g., that some specific inference is invalid or some specific sentence is infelicitious) than of the underlying explanations.

But that is just my view, and not every judge agrees with me, so it will be helpful to consider some arguments for the conclusion that we already know to be true: that, even if the United States is a democracy and ought to have compulsory voting, that doesn’t suffice to show that, in a democracy, voting ought to be compulsory—in other words, that “a democracy” in the resolution is generic, not existential.

Second, existential uses of the indefinite, such as “A cat is on the mat,” are upward- entailing.3 This means that if you replace the noun with a more general one, such as “An animal is on the mat,” the sentence will still be true. So let’s do that with “a democracy.” Does the resolution entail “In a society, voting ought to be compulsory”? Intuitively not, because you could think that voting ought to be compulsory in democracies but not in other sorts of societies. This suggests that “a democracy” in the resolution is not existential.

#### It applies to this topic – a] workers is an existential bare plural bc it has no determiner b] The sentence “A just government ought to recognize the right of workers to strike” does not imply “a just government ought to recognize the right of people to strike”

#### Violation – they spec \_\_\_\_\_\_\_\_

#### Standards

#### 1] Limits – they can spec infinite different workers like agricultural workers, nurses etc - that’s supercharged by the ability to spec countries. The neg looses access to generics since they are always ahead on the specifity question - . This takes out functional limits – it’s impossible for me to research every possible combination of workers, strikes and governments

#### 2] TVA solves – just read your aff as an advantage to a whole rez aff – we don’t stop them from reading new FWs, mechanisms or advantages. PICs aren’t aff offense – a] it’s ridiculous to say that neg potential abuse justifies the aff being non-T b] There’s only a small number of pics on this topic c] PICs incentivize them to write better affs that can generate solvency deficits to PICs

DTD  
No rvis

CI > Reaonsability   
Reject 1ar theory o/ws

## Case

## 2 120

#### Counterplan TextThe United states ought to recognize a right of agricultural workers to strike when authorized by a majority of striking workers through a secret balloting process

#### That solves

Tenza 19 -- Mlungisi Tenza (LLB, LLM, LLD @ University of KwaZulu-Natal), Investigating the need to reintroduce a ballot requirement for a protected strike in South Africa, August 1 2019, *Obiter*Volume 40, Issue 2, https://journals.co.za/doi/10.10520/EJC-1936af7594 WJ

Violent protracted strikes can have devastating effects on employers, employees and the economy at large. Despite the fact that workers have a constitutional right to strike, it is important that the exercising of such a right not be allowed to go beyond the necessary limits. Currently, strikes are often characterised by violent conduct. Resolution of strikes also takes a long time, leaving many people unemployed by the time a solution is found. This not only affects the employees concerned, but is a contributing factor to poverty. To prevent long and violent strikes from taking place, it is suggested that there should be changes to existing labour law so as to include a ballot requirement. The law should compel a convening union to ballot members before staging a strike. To be credible, the balloting process should be chaired by an independent body, such as the IEC or a representative from the CCMA. This is the position in Australia and Canada. In these countries, if a union calls a strike without having balloted its members, such a strike is unlawful and civil action can be taken against the union and its members. Balloting members prior to strike action would help to establish their willingness to embark on a strike. If the majority vote in favour of a strike, it would send a signal to the employer that workers are serious and that it must consider their concerns or demands in a serious light. The employer and employee representatives are expected to engage fruitfully during negotiations and to avoid impending industrial action.

#### Pre-strike ballots increase leverage on employers without preventing production – that benefits workers and industry

Orchiston et al 19 -- Alice Orchiston (Lecturer, Faculty of Law, University of New South Wales), Breen Creighton (Honorary Professor, Graduate School of Business and Law, RMIT University), Catrina Denvir (Research Fellow, Director of Ulster Legal Innovation Centre, School of Law, Ulster University), Richard Johnstone (Professor, Faculty of Law, Queensland University of Technology), and Shae Mccrystal (Professor of Labour Law, Sydney Law School, The University of Sydney), PRE-STRIKE BALLOTS AND ENTERPRISE BARGAINING DYNAMICS: AN EMPIRICAL ANALYSIS, Melbourne University Law Review, Vol 42(2):593 2019 WJ

Our analysis found that a PABO application can be an effective means for unions to increase leverage (via escalating the ‘threat’ of industrial action), without necessarily having to resort to industrial action. This is because a successful ballot outcome signals industrial strength and accelerates the ‘countdown’ towards industrial action.

In general, the union representatives interviewed perceived the decision to apply for a PABO (with a subsequent ballot), and the decision to take industrial action, as separate and distinct steps in escalating pressure in negotiations. However, respondents expressed a range of different views as to the degree of leverage that a PABO application and/or subsequent industrial action would provide.

Some union representatives explained the power of a PABO application with reference to the risk of ‘disruption’ that employers would face from any industrial action that could logically follow a successful ballot.63 Other representatives described a successful ballot result as a strategic signal of collective strength. For example:

It’s factored as a message ... the conversation I had with the members is, ‘look to be honest even if you disagree with taking industrial action have a think about voting yes for it anyway because it is the message that counts’ ... in the formal process, the employer sees employees vote ‘yes’ because they will be looking at that and seeing how strong you are.64

For some union representatives, the prospect of media coverage, either of the ballot outcome or subsequent industrial action, and the opportunity to ‘get the employer’s name in the paper’, were seen as further potential advantages of invoking the PABO process.65 For example, one union interviewee said that once the ballot results were announced, ‘it actually made the papers’, and this helped to shift the negotiations in the union’s favour because of the employer’s desire to avoid ‘bad press’.66 These sentiments were echoed by the employer representative from the same negotiation:

We have an employer brand. We don’t want to be splashed all over the media ... we don’t want that out there because I don’t think it’s a positive look.67

The threat of media coverage can create pressure on employers where industrial action could disrupt production or service delivery. For instance, one employer representative referred to a PABO application that was timed to coincide with negotiations for a major business contract, and indicated that if the customer found out about the threat of industrial action, they would ‘probably cease negotiations’ with the company.68

Interviews revealed that some unions are able successfully to threaten industrial action (via the application for a PABO), even where they have no intention of actually taking action. As one union representative explained:

I have to confess one of the greatest things the Liberals ever did for us soft unions was that really lengthy and painful process to take a protected action ballot. That’s actually been one of the greatest advantages for us ... in the olden days you couldn’t bluff about industrial action; you took it or you didn’t take it. You were out the gate or you were not out the gate. This lengthy process of both and application and objection and things like that, it’s just been a godsend for us because you can bluff the whole way through it. Even if there’s no intention of taking action you can look like you’re going to take action. Whereas before the ballot process and all the lengthy things, the first thing the company knew about action was people were marching past the bloody manager’s office out the gate.69

#### Economic Collapse goes Nuclear.

Tønnesson 15, Stein. "Deterrence, interdependence and Sino–US peace." International Area Studies Review 18.3 (2015): 297-311. (the Department of Peace and Conflict, Uppsala University, Sweden, and Peace research Institute Oslo (PRIO), Norway)

Several recent works on China and Sino–US relations have made substantial contributions to the current understanding of how and under what circumstances a combination of nuclear deterrence and economic interdependence may reduce the risk of war between major powers. At least four conclusions can be drawn from the review above: first, those who say that interdependence may both inhibit and drive conflict are right. Interdependence raises the cost of conflict for all sides but asymmetrical or unbalanced dependencies and negative trade expectations may generate tensions leading to trade wars among inter-dependent states that in turn increase the risk of military conflict (Copeland, 2015: 1, 14, 437; Roach, 2014). The risk may increase if one of the interdependent countries is governed by an inward-looking socio-economic coalition (Solingen, 2015); second, the risk of war between China and the US should not just be analysed bilaterally but include their allies and partners. Third party countries could drag China or the US into confrontation; third, in this context it is of some comfort that the three main economic powers in Northeast Asia (China, Japan and South Korea) are all deeply integrated economically through production networks within a global system of trade and finance (Ravenhill, 2014; Yoshimatsu, 2014: 576); and fourth, decisions for war and peace are taken by very few people, who act on the basis of their future expectations. International relations theory must be supplemented by foreign policy analysis in order to assess the value attributed by national decision-makers to economic development and their assessments of risks and opportunities. If leaders on either side of the Atlantic begin to seriously fear or anticipate their own nation’s decline then they may blame this on external dependence, appeal to anti-foreign sentiments, contemplate the use of force to gain respect or credibility, adopt protectionist policies, and ultimately refuse to be deterred by either nuclear arms or prospects of socioeconomic calamities. Such a dangerous shift could happen abruptly, i.e. under the instigation of actions by a third party – or against a third party. Yet as long as there is both nuclear deterrence and interdependence, the tensions in East Asia are unlikely to escalate to war. As Chan (2013) says, all states in the region are aware that they cannot count on support from either China or the US if they make provocative moves. The greatest risk is not that a territorial dispute leads to war under present circumstances but that changes in the world economy alter those circumstances in ways that render inter-state peace more precarious. If China and the US fail to rebalance their financial and trading relations (Roach, 2014) then a trade war could result, interrupting transnational production networks, provoking social distress, and exacerbating nationalist emotions. This could have unforeseen consequences in the field of security, with nuclear deterrence remaining the only factor to protect the world from Armageddon, and unreliably so. Deterrence could lose its credibility: one of the two great powers might gamble that the other yield in a cyber-war or conventional limited war, or third party countries might engage in conflict with each other, with a view to obliging Washington or Beijing to intervene.

#### Extinction

Edwards 17 [Paul N. Edwards, CISAC’s William J. Perry Fellow in International Security at Stanford’s Freeman Spogli Institute for International Studies. Being interviewed by EarthSky. How nuclear war would affect Earth’s climate. September 8, 2017. earthsky.org/human-world/how-nuclear-war-would-affect-earths-climate] Note, we are only reading parts of the interview that are directly from Paul Edwards --

In the nuclear conversation, what are we not talking about that we should be?

We are not talking enough about the climatic effects of nuclear war. The “nuclear winter” theory of the mid-1980s played a significant role in the arms reductions of that period. But with the collapse of the Soviet Union and the reduction of U.S. and Russian nuclear arsenals, this aspect of nuclear war has faded from view. That’s not good. In the mid-2000s, climate scientists such as Alan Robock (Rutgers) took another look at nuclear winter theory. This time around, they used much-improved and much more detailed climate models than those available 20 years earlier. They also tested the potential effects of smaller nuclear exchanges. The result: an exchange involving just 50 nuclear weapons — the kind of thing we might see in an India-Pakistan war, for example — could loft 5 billion kilograms of smoke, soot and dust high into the stratosphere. That’s enough to cool the entire planet by about 2 degrees Fahrenheit (1.25 degrees Celsius) — about where we were during the Little Ice Age of the 17th century. Growing seasons could be shortened enough to create really significant food shortages. So the climatic effects of even a relatively small nuclear war would be planet-wide. What about a larger-scale conflict? A U.S.-Russia war currently seems unlikely, but if it were to occur, hundreds or even thousands of nuclear weapons might be launched. The climatic consequences would be catastrophic: global average temperatures would drop as much as 12 degrees Fahrenheit (7 degrees Celsius) for up to several years — temperatures last seen during the great ice ages. Meanwhile, smoke and dust circulating in the stratosphere would darken the atmosphere enough to inhibit photosynthesis, causing disastrous crop failures, widespread famine and massive ecological disruption. The effect would be similar to that of the giant meteor believed to be responsible for the extinction of the dinosaurs. This time, we would be the dinosaurs. Many people are concerned about North Korea’s advancing missile capabilities. Is nuclear war likely in your opinion? At this writing, I think we are closer to a nuclear war than we have been since the early 1960s. In the North Korea case, both Kim Jong-un and President Trump are bullies inclined to escalate confrontations. President Trump lacks impulse control, and there are precious few checks on his ability to initiate a nuclear strike. We have to hope that our generals, both inside and outside the White House, can rein him in. North Korea would most certainly “lose” a nuclear war with the United States. But many millions would die, including hundreds of thousands of Americans currently living in South Korea and Japan (probable North Korean targets). Such vast damage would be wrought in Korea, Japan and Pacific island territories (such as Guam) that any “victory” wouldn’t deserve the name. Not only would that region be left with horrible suffering amongst the survivors; it would also immediately face famine and rampant disease. Radioactive fallout from such a war would spread around the world, including to the U.S. It has been more than 70 years since the last time a nuclear bomb was used in warfare. What would be the effects on the environment and on human health today? To my knowledge, most of the changes in nuclear weapons technology since the 1950s have focused on making them smaller and lighter, and making delivery systems more accurate, rather than on changing their effects on the environment or on human health. So-called “battlefield” weapons with lower explosive yields are part of some arsenals now — but it’s quite unlikely that any exchange between two nuclear powers would stay limited to these smaller, less destructive bombs.

## 3 90

#### Biden’s reconciliation bill passes now but compromises are delicate

Caygle and Everett 10/20 (Heather and Burgess, Congress reporters at Politico) “Dems edge closer to ditching disarray” <https://www.politico.com/news/2021/10/20/dems-edge-closer-ditching-disarray-516312> EE, DebateDrills

Nancy Pelosi and Chuck Schumer’s strategy to force through Democrats’ domestic agenda flamed out spectacularly in September. They’re ready to try it all over again.

With their party’s long-sought priorities on the line, the speaker and Senate majority leader are hustling to clinch a deal as soon as possible that would lock in evasive centrists on a framework for President Joe Biden’s $2 trillion social spending package. That framework, in turn, would free up needed progressive votes for a bipartisan infrastructure bill by Oct. 31.

It’s a rerun of the playbook Democratic leaders used just weeks ago, [only to have it blow up](https://www.politico.com/news/2021/10/01/house-democrats-biden-infrastructure-deal-514878) in their faces. But Democrats insist it actually might work this time, with political and legislative incentives aligning more neatly than they did in September.

Pelosi and Schumer are telling their members they need to secure an agreement on the social spending bill by the end of this week. The House could even vote by the end of the month.

“We’re getting there. The gaps are closing. The vibe in our caucus is different. Folks are being more clear-eyed about: ‘We’ve got to get this done,’” said Sen. Chris Coons (D-Del.), who is close to Biden. “There’s a lot of reasons why these next 10 days are critical. To chip shot this into December is really, really problematic.”

Democrats are also getting more specific, with Sen. Joe Manchin (D-W.Va.) tossing a carbon tax and a green utilities program overboard while insisting on means testing much of the bill. Biden also told progressives Tuesday that an expanded boost to the child tax credit could be made shorter and that free community college could be jettisoned.

Biden’s price tag for the bill at the moment is around $2 trillion and he wants to lock down an agreement before heading overseas at the end of this month for climate talks, according to Democrats familiar with Tuesday’s discussions.

Rep. Jimmy Gomez (D-Calif.) said he left Biden’s meeting with progressives thinking “the president is committed to getting this done as soon as possible. And I was kind of surprised by that.”

Gomez said things remain “touch and go” and it’s unclear how much is finalized, even as Democratic leaders hope to close in on a framework in the coming days.

But it’s clear the momentum has shifted in recent days. Biden and Democrats are having substantive conversations about which programs will stay in the bill, which priorities will be cut and how to knit the rest together into a package both centrists and liberals can support.

“He's being decisive, he’s showing leadership,” Rep. Debbie Dingell (D-Mich.) said of Biden after progressives’ two-hour Tuesday meeting at the White House. “I think it’s going to get done this time.”

There’s still much more to get through, however. And Democrats have a crunch of deadlines waiting later this year that they must balance with [their last, best chance](https://www.politico.com/news/2021/10/17/democrats-agenda-last-chance-516160) to capitalize on their full control of Washington and pass once-in-a-generation legislation that would significantly shore up the nation’s social safety net.

Manchin and Sen. Kyrsten Sinema (D-Ariz.) are the toughest votes to secure, but both were whirlwinds of activity on Tuesday. Each of the centrists met with Biden. And while Manchin was in the Democratic lunch with his colleagues settling on a quick timeline, Sinema was meeting with senior White House staff, according to her office. Sinema’s office declined to comment on her commitment to finishing things by the end of the week.

Though the odds are still stacked against the party, Democrats say it’s clear there’s a renewed sense of urgency among party leaders. Schumer is nudging his holdouts more than ever before, Pelosi is free from the constraints of [an agreement with moderates](https://www.politico.com/news/2021/08/24/gottheimer-house-dems-pelosi-deal-506819) that imploded and Biden is finally engaged in a meaningful way. Plus, nearly everyone has accepted the bill won’t be $3.5 trillion, as originally proposed.

“There’s a real consensus that it’s time,” said the party’s No. 3 Senate leader, Patty Murray (D-Wash.). “We all see the timeline, there’s a lot of struggle about what’s going to go in a bill that’s literally half the size of what people envisioned.”

A month ago, some Democrats privately grumbled that Pelosi was working with an artificial deadline based on an agreement she made with moderates in her chamber — but one that didn’t motivate, and maybe even alienated, key Senate holdouts from cutting a deal. Manchin and Sinema, specifically, are still fuming that the House hasn’t passed the Senate’s bipartisan infrastructure bill.

Still, just a few weeks later, several Democrats involved in the negotiations insist that even the centrists much-maligned by their party's base for chipping away at the bill are springing into action. At a caucus meeting Tuesday, Manchin listened intently to his colleagues in what one attendee called a “turning point, in that there was more of a focus on urgency.”

Importantly, Democrats on all sides are coming to grips with the reality that all of their demands will not be met. The Obamacare subsidies that House Democratic leaders have pushed for are still in the package, while liberals’ demand for a massive Medicare expansion — something Sen. Bernie Sanders (I-Vt.) called non-negotiable last week — may be significantly pared back.

While jettisoning some policy proposals and slimming the bill seem like unwelcome developments for Democrats, the more specific negotiations indicate that the party is actually down to brass tacks. Still, Gomez said some of the discussion involved “trial balloons to see what the reactions of the different factions are.”

Sen. Jon Tester (D-Mont.) said on Tuesday morning that the “fact we don’t have a deal and have been gone for 10 days [on recess] means we’ve got to do better.” But after meeting with Biden Tuesday afternoon, his opinion had changed: “I think there’s a lot that’s happened the last 10 days, I just wasn’t aware of it. We’re getting to a point where we can move pretty well.”

It's critical for Pelosi and Schumer to show they can govern in a sharply divided Congress with the thinnest of majorities. Biden needs a huge win ahead of a global climate summit in Glasgow. And every Democrat wants to put a victory on the board to boost Virginia gubernatorial candidate Terry McAuliffe, whose loss would be [a major setback](https://www.politico.com/news/2021/10/16/democrats-reckoning-virginia-governor-race-516086) to the party’s agenda and midterm prospects.

Plus, the nation's highway trust fund runs dry at the end of October and will need more money from Congress — which the bipartisan infrastructure bill will supply once it clears the House.

House Majority Leader Steny Hoyer (D-Md.) insisted Tuesday that Democratic leaders are still pushing to finalize both a roughly $2 trillion social infrastructure bill and pass the $550 billion infrastructure bill by the end of the month. But even if party leaders can get their warring factions to agree to a framework for the spending bill after weeks of public feuding, that too will amount to a triumph after months of jockeying.

“We're working very hard to have both of those bills ready to be passed by the House of Representatives before that date,” Hoyer told reporters. “Now, if we

#### The plan gets lumped in with the reconciliation bill and causes conflict

Mueller 09/21/2021 (Eleanor, labor reporter) “Unions squeeze pro-labor priorities into Democrats’ spending bill” Politico, <https://www.politico.com/news/2021/09/21/unions-reconciliation-bill-513423> EE, DebateDrills

Tucked amid the investments in child care, higher education and clean energy are below-the-radar provisions that would make it easier for workers to organize, such as giving the National Labor Relations Board sharper teeth and empowering it to conduct union elections online.

Both of those policies are also included in the Protecting the Right to Organize Act — an overhaul of U.S. labor law Democrats drafted to resuscitate tapering union membership, which is stalled in the Senate.

How much the language in the spending bill could really move the needle on the fortunes of organized labor remains to be seen. It must also survive the Byrd rule, which allows only spending-related legislation to move through the reconciliation process that Democrats intend to use to pass the bill. Democrats have had one of their other top priorities — immigration reform — stymied by the rule already.

Union officials are pouring time, money and energy into making sure the provisions — which they helped shape — make it across the finish line. If they are successful, it could constitute the biggest pro-union shift in U.S. labor law since the National Labor Relations Act was enacted in 1935, labor experts said.

“Labor is not only all over supporting it, it has helped craft it,” American Federation of Teachers President Randi Weingarten said in an interview.

Some on the employer side of the table say the provisions are far too consequential to be tucked into a massive spending bill.

“These are cataclysmic questions of the most fundamental policy that have gargantuan implications for the way labor and management is going to work together or not work together in this country,” said attorney Michael Lotito, who represents employers for the law firm Littler. “And this type of fundamental policy change is being done using a backdoor approach.”

Republican lawmakers have also denounced the tactic.

"The PRO Union Bosses Act was dead upon arrival in the Senate, so Speaker Pelosi and Committee Democrats are manipulating the legislative process to enact portions,” said Rep. Virginia Foxx (N.C.), the top Republican on the House Education and Labor Committee.

Unions and their allies have seen the reconciliation bill as a possible vehicle for the labor provisions since they were introduced in the PRO Act.

#### Quickly secures the vulnerable grid.

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

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

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

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

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

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

#### Grid vulnerabilities spark nuclear war.

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

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

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

Already read our impact card

## 4

## Case

#### Agri workers decline now – we can’t balance productivity but that spurs AI

Progressive automationns 21 Guest Writer (PA Engineer), 4-24-2020, "Automation in Agriculture: New Solutions to Eternal Challenges," Progressive Automations, <https://www.progressiveautomations.com/blogs/how-to/automation-in-agriculture-new-solutions-to-eternal-challenges> //RD Debatedrills

Despite the overall growth of the world population the amount of agricultural workers is on the steady decline implying a more dire labor shortage in the industry for decades to come. Besides, a universally-felt propensity towards organic and sustainably-produced foods which is especially perceptible in western countries spells more attention paid to growing and harvesting thus adding new facets to the modern farming definition.

Eventually, modern farming finds itself on the horns of a dilemma. Farmers aspire to produce higher-quality crops in greater quantities but the number of available hands necessary to do it is permanently shrinking with minute odds that it will be otherwise any time soon. With the influx of workers into agriculture petering out the only alternative lies in employing more efficient tools.In the world of today, automation reigns supreme. It is leveraged in a plethora of spheres – from [office furniture](https://www.progressiveautomations.com/blogs/products/ways-to-increase-workflow-benefits-using-standing-desks) and [domestic environment mechanization](https://www.progressiveautomations.com/blogs/how-to/how-to-automate-your-trap-door-application) to medicine and various industries. Agriculture is no exception where modern farming tools and agricultural automation can help to streamline crop production cycle making it more efficient and less labor-consuming. This vector towards farming automation has become especially apparent in the new millennium with more money channeled into agricultural startups and automated farm systems. TechCrunch estimated the capital investment in such companies at an astonishing figure of $1.5 billion in 2017 which is seven and a half times more than ten years before. The number of startups manifests a significant growth as well with 160 agriculture automation companies vying for financing in comparison to 31 in 2007. The list of modern farming techniques encompasses all aspects of crop production. Some companies introduce software allowing efficient seed and fertilizer management as well as soil and irrigation control down to the prediction of yield. Other startups offer drones that are leveraged not only with surveillance purposes but can apply crop treatments from above such as fertilizers, pesticides, herbicides, and the like. Still others design and employ automated farm equipment with a range of applications – from grain augers, combines, and automated tractors to fruit picking robots. However, beckoning such prospects may seem farmers realize that automated agriculture starts not with modern farming equipment but with proper intelligence and reconnaissance that is data collecting. The accurate information about the condition of your farm is delivered by sensors. For instance, remote sensors manufactured by CropX are placed all over the field to notify farmers about an inadequate state of the soil like the lack of moisture in it. However, automation in agriculture makes the immediate feedback of the farmer redundant since automated farming systems include other devices connected to the sensors and gauges to react to the obtained data following the preset steps and procedures. So the irrigation system switches on conveying water when and where it is most wanted. Such modern farming technology is called the Internet of Things (IoT) and it doesn’t require the presence of a human to control various agricultural processes. Instead, sensors, gauges, and machines function on their own being linked together via the cellular network, mobile Internet, Bluetooth, or any other type of wireless connection.

#### Icreascig wages = impediment to Ai usage

Progressive automatios 20’ Guest Writer (PA Engineer), 4-24-2020, "Automation in Agriculture: New Solutions to Eternal Challenges," Progressive Automations, https://www.progressiveautomations.com/blogs/how-to/automation-in-agriculture-new-solutions-to-eternal-challenges

Application of IoT at an automated farm provides resource delivery optimization and maximum efficiency of precision agriculture both of which spell greater yields of higher-quality crops. The automated farming equipment connected through the Internet is expected to manifest a [20% growth](https://www.businessinsider.com/smart-farming-iot-agriculture) over the next few years which is explained by its potential to be employed at each step in the agriculture value chain. Managing a farm is a complex activity involving dozens of operations the implementation of which is conditioned by numerous factors. These factors influence the farmers’ decisions as to the choice and application of seeds, fertilizers, pesticides, and contain information about the weather conditions, expected rainfall, air, and soil temperature, etc. This data is provided by sensors that trigger certain software algorithms that optimize corresponding agricultural processes at automated farms. Another potential domain for agricultural IoT application is related to resource tracking and management. By employing respective software farmers will be able to register all field applications with the subsequent tracking of these resources to storage locations and elevators. As a result of such optimization, food, and beverage manufacturers can excel at creating marketing value for their businesses. Modern farming technologies greatly benefit from employing IoT in storage safety. For example, equipping silos and elevators with OPI Systems’ sensors enables to monitor the inside environment conditions and warn people about excessive heat or moisture that can be detrimental to the stored grain or send alerts if a fire is imminent. Automation in farming isn’t limited to the ushering of state-of-the-art technologies. It encompasses upgrading conventional and introducing modern agricultural tools and machines. MODERN FARM MACHINERY An automatic farm boils down to the participation of as little human element as possible which presupposes leveraging self-controlled machines and robots. What impedes a large-scale introduction of such autonomous modern farming equipment is its high price and restricted commercial availability. However, the contemporary mechanization trend spurs many manufacturers to develop cost-effective and reliable farm automation machines. What is modern farming automated machinery as most of us imagine it? It is probably the mental picture of a tractor, combine, or motorized auger that does all the work by itself without any human participation or indeed intervention. Sharing this vision many companies try to implement it developing their new models with the increasing employment of autonomous features. For instance, modern tractors by John Deere have fully automated line keeping and depth adjustment functions. Other major tractor manufacturers move along similar tracks aspiring to design remotely controlled and pre-programmed machines that would allow their users to cut down on labor and input costs. Some of their projects have already come to fruition. DOT Technology Corp produced a diesel-powered seeder that can sow an entire field with no human interference by following predefined routes. Rowbot has come up with a modern agriculture machine that can spread nitrogen between cornrows and sow cover crops before the ripe corn is harvested late in the season. To crown all such disparate agriculture automation endeavors, The Hands-Free Hectare project was launched in the UK where completely autonomous farming machines planted, cultivated, and harvested a hectare of barley with no human setting a foot into the field. Having made an automated wheat farm a reality of the nearest future manufacturers are setting daring plans in other agricultural spheres including those which have traditionally been considered hard to automate. One such domain is horticulture where fruit and vegetable harvesting is a delicate procedure since it should prevent both bruising of gentle crops and damaging plants. First essays in this realm were made by Abundant Robotics and Energid that built robots for picking apples and oranges respectively. They are just pilot samples that are to yet be developed into viable models susceptible to employment in the real orchard conditions. ELEVATED FARMING A modern machine in agriculture isn’t just a ground crawler like a tractor or a grain auger. Some of them watch crops from on high providing information of their state as well as identify problem zones, spray chemicals or even blow water off cherry trees ready for harvesting to prevent berries from bursting after heavy rainfall. The use of drones is especially beneficial in cramped row spacing conditions which can be exacerbated by the hillside location of crops. Such conditions are in evidence at Napa vineyards which makes fungicide application a particularly taxing activity. So instead of farmworkers obliged to carry heavy sprayers on their backs, the task was entrusted to a remote-piloted helicopter by Yamaha Precision Agriculture which significantly streamlined the procedure sparing humans a literally backbreaking work. CONCLUSION With the introduction of automation, agriculture becomes increasingly user-friendly with farmers spending less time in the field and more time at computers analyzing data and diagnosing problems. So far completely automatic farms are still a coveted dream but rapid development and sophistication of agricultural machines pav

Empirically proven

#### Automation k2 food stability – we’re growing big

Mary Shacklett, 3-23-2021, "AI and robotics are helping optimize farms to increase productivity and crop yields," TechRepublic, <https://www.techrepublic.com/article/ai-and-robotics-are-helping-optimize-farms-to-increase-productivity-and-crop-yields//RD> Debatedrills

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farmers have long struggled with operational optimization and labor concerns. Finding enough labor to get the job done, as well as keeping workers safe is a constant struggle. "There is an immediate need to improve efficiency and reduce costs, especially now that the pandemic has exposed just how fragile the supply chain is," said Suma Reddy, CEO of Future Acres, an agricultural robotics and [artificial intelligence](https://www.techrepublic.com/resource-library/downloads/cheat-sheet-artificial-intelligence-free-pdf/) company. "We saw shortages in both production and more workers being put at risk when picking specialty crops on a daily basis that have really caused the industry to take a step back and re-examine how we can create greater resiliency in the food chain." SEE: [Natural language processing: A cheat sheet](https://www.techrepublic.com/resource-library/downloads/natural-language-processing-a-cheat-sheet-free-pdf/) (TechRepublic) One idea is to equip farms with a combination of AI and [robotics](https://www.zdnet.com/article/free-pdf-robotics-in-the-enterprise/) that can "think through" as well as do some of the physical work of [Survey: COVID-19 continues to impact digital transformation plans](https://adclick.g.doubleclick.net/pcs/click%253Fxai%253DAKAOjsuuctM1oaMV5eGaLeL_m5rYS-TIgyAdDeGvbQTxISVTHexvy5Kgd9YE7YQTUoA7vfShMvPNiQA7HuWevE36nQekUILABGR0_D2pHBZU7s5Oz-VfS6nLHdrs3N5SBWclgqb33GjbX8dKoXBFMHw42m6lRDYpJ2HkO7CiU1XnT1xf_6AM2Vh_iOBBN5Ir2Uh38GtbRfugNA926w4_zqZqK-AcqUqg1UCn9S5P7kV3XwPjDwOQezZECwZ3a7RAgkDWUcae5VvlXXoLM0eF6qoBAlJYXcQTSWsosCpMLAC2Fm1FAmN1vKKJWflfnm9LYPlswZSd8rro-EuU1TKum2d_kuySAxLcN7Ba%2526sig%253DCg0ArKJSzPmDkOxkFNAsEAE%2526fbs_aeid%253D%255Bgw_fbsaeid%255D%2526urlfix%253D1%2526adurl%253Dhttps:/lnk.techrepublic.com/redir?edition=en&ursuid=&devicetype=desktop&pagetype=&assettitle=&assettype=&topicguid=&viewguid=69e72dda-d926-4c0d-9ff9-0ea5c69f8e4d&docid=84cce099-c8a3-4670-989f-9e3fa23f75c1&promo=1064&ftag_cd=TRE-00-10aaa4e&spotname=dfp-in-article&destUrl=https%253A%252F%252Fwww.techrepublic.com%252Farticle%252Fsurvey-covid-19-continues-to-impact-digital-transformation-plans%252F%253Fpromo%253D1064%2526cval%253Ddfp-in-article%2526tid%253D311211859352977192%2523ftag%253DRSS56d97e7&ctag=medc-proxy&siteId=&rsid=cbsitechrepublicsite&sl=&sc=us&assetguid=&q=&cval=84cce099-c8a3-4670-989f-9e3fa23f75c1;1064&ttag=&bhid=&poolid=100&tid=311211859352977192) As a result of the pandemic, 69% of respondents will spend the same amount (or more) as last year on digital transformation projects. Research provided by TechRepublic Premium "We introduced Carry for that purpose," Reddy said. "It's an autonomous, electric agricultural robotic harvest companion to help farmers gather hand-picked crops faster and with less physical demand." Image: Future Acres The self-driving Carry vehicle uses a combination of AI, automation and electric power to transport up to 500 pounds of crops. Reddy estimates that Carry can increase production efficiency by up to 30%, paying for the vehicle investment in 80 days. "Our initial launch was targeted at customers at small- to medium-sized table-grape farms in the U.S. that are larger than 100 acres," Reddy said. "Grapes were the specialty crop we focused on initially, but the specialty crop market covers more than just grapes, and we believe that Carry can improve the harvesting of those types of crops as well." Morder Intelligence estimates that the [AI market in agriculture, valued at $766.41 million in 2020, will reach $2.5 billion by 2026](https://www.mordorintelligence.com/industry-reports/ai-in-agriculture-market). This is a compound annual growth rate of 21.52% between 2021 and 2026. SEE: [Smart farming: How IoT, robotics, and AI are tackling one of the biggest problems of the century](https://www.techrepublic.com/article/smart-farming-how-iot-robotics-and-ai-are-tackling-one-of-the-biggest-problems-of-the-century/) (TechRepublic) In this market, Carry is just one example of an array of autonomous technologies in agriculture that include AI, robotics and automation. Other examples are autonomous tractors and harvesters, as well as aerial drones that map fields and identify topography, soil types and moisture content from the air to provide input for prescriptive fertilizers that AI develops in order to optimize crop yields. 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SEE: [Smart farming: How IoT, robotics, and AI are tackling one of the biggest problems of the century](https://www.techrepublic.com/article/smart-farming-how-iot-robotics-and-ai-are-tackling-one-of-the-biggest-problems-of-the-century/) (TechRepublic) In this market, Carry is just one example of an array of autonomous technologies in agriculture that include AI, robotics and automation. Other examples are autonomous tractors and harvesters, as well as aerial drones that map fields and identify topography, soil types and moisture content from the air to provide input for prescriptive fertilizers that AI develops in order to optimize crop yields. "In our case, we wanted to provide a robotic harvest companion that can transport up to 500 pounds of crops on all types of terrain and in all weather conditions," Reddy said. "To do this, we use [machine learning](https://www.techrepublic.com/article/machine-learning-the-smart-persons-guide/) and [computer vision](https://www.techrepublic.com/article/ai-is-not-yet-perfect-but-its-on-the-rise-and-getting-better-with-computer-vision/) capabilities that enable the vehicle to avoid obstacles like trees and people, and to collect and apply data to further optimize precision and efficiency." SEE: [Future of farming: AI-enabled harvest robot flexes new dexterity skills](https://www.techrepublic.com/article/future-of-farming-ai-enabled-harvest-robot-flexes-new-dexterity-skills/) (TechRepublic) As with any technological advancement, trial-and-error proofs of concept are needed. Farming operational habits also need to be changed in order to take advantage of new technology. What Reddy and others in the field have learned is that trialing AI and robotics in actual use cases offers the only true test of how well the technology performs. This is a universal truth for all types of AI and robotics—not just the ones that find themselves in a farmer's field. As a one-time Peace Corps volunteer in Africa, Reddy wanted to "build a better bridge between how we manage our resources and build a better future." Her company and others are now transforming agriculture with the help of big data, analytics and hardware, and it can't come too soon. The [United Nations estimates that in 30 years, the global population will reach 9.7 billion people](https://insideclimatenews.org/news/18072019/food-climate-change-solutions-agriculture-beef-waste-forests-growing-population-wri-report/), and there will be a need to provide 50% more food by 2050. Now is the time for AI and robotics solution providers to jump in.

#### Strikes devastate the economy – Michigan proves

McElroy 19 [John McElroy (editorial director of Blue Sky Productions and producer of ”Autoline” for WTVS‐Channel 56 Detroit and ”Autoline Daily” the online video newscasts). “Strikes Hurt Everybody.” Wards Auto Industry News. 25 October 2019. JDN. https://www.wardsauto.com/ideaxchange/strikes‐hurt‐everybody]

But strikes don’t just hurt the people walking the picket lines or the company they’re striking against. They hurt suppliers, car dealers and the communities located near the plants. The Anderson Economic Group estimates that 75,000 workers at supplier companies were temporarily laid off because of the GM strike. Unlike UAW picketers, those supplier workers won’t get any strike pay or an $11,000 contract signing bonus. No, most of them lost close to a month’s worth of wages, which must be financially devastating for them. GM’s suppliers also lost a lot of money. So now they’re cutting budgets and delaying capital investments to make up for the lost revenue, which is a further drag on the econ‐ omy. According to CAR, the communities and states where GM’s plants are located col‐ lectively lost a couple of hundred million dollars in payroll and tax revenue. Some economists warn that if the strike were prolonged it could knock the state of Michigan – home to GM and the UAW – into a recession. That prompted the governor of Michigan, Gretchen Whitmer, to call GM CEO Mary Barra and UAW leaders and urge them to settle as fast as possible. So, while the UAW managed to get a nice raise for its members, the strike left a path of destruction in its wake. That’s not fair to the innocent bystanders who will never regain what they lost.

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