# MSDI Unilateral CP + Aff Answers



## 1NC

### Topic

“The United States federal government should substantially increase its security cooperation with the North Atlantic Treaty Organization in one or more of the following areas: artificial intelligence, biotechnology, cybersecurity.”

### VS AI

#### The United States federal government should substantially increase its unilateral security measures in the realm of artificial intelligence by [doing the aff]

#### US-NATO engagement on AI fails

Ulrike Esther Franke, 2021 (Ulrike Esther Franke, 2021, European Council on Foreign Relations, ARTIFICIAL DIVIDE: HOW EUROPE AND AMERICA COULD CLASH OVER AI, https://www.jstor.org/stable/resrep29123, 6-24-2022) SCade

Obstacles to cooperation Both sides of the Atlantic are already motivated to cooperate with each other on AI. But, despite these shared interests, transatlantic cooperation on AI may not be straightforward. Four trends, in particular, could pose problems: transatlantic estrangement; European digital autonomy efforts; differing views on China; and, potentially, Brexit. Transatlantic estrangement The transatlantic alliance has had a bad four years. The Trump administration’s criticism of the United Nations and the World Trade Organization, the president’s threats to leave NATO, and his active criticism of the EU all made Europeans wonder whether they had lost their most important partner. Moreover, in light of the conflict over 5G, in the minds of many Europeans, technology in particular has become an area that creates conflict in the transatlantic relationship rather than fostering cooperation. Although transatlantic relations are likely to improve under Biden, substantial damage has been done, and it will take some time to mend these ties. But, even if relations improve, it is becoming increasingly obvious that US has a diminishing interest in Europe as a geopolitically important part of the world. This trend was already visible under Trump’s predecessor, Barack Obama. It is, therefore, unsurprising that, on technology cooperation, both sides emphasise the importance of working with other actors as well as each other. The US National Security Commission on AI, for example, recommends that the US Departments of State and Defense “should negotiate formal AI cooperation agreements with Australia, India, Japan, New Zealand, South Korea, and Vietnam”. Its March 2020 report emphasises on several occasions the importance of the Five Eyes intelligence alliance. Meanwhile, Europeans are pursuing the idea of an alliance for multilateralism. And, on technology and AI more specifically, they have also begun to reach out to other democratic allies. European digital autonomy The most important aspect of transatlantic estrangement, however, is not the loss of trust between the US and Europe – which they will eventually reverse. Rather, during the four years of the Trump administration, and partly in response to isolationist tendencies in the US, Europeans have become much more comfortable talking about European strategic autonomy or sovereignty. Without encouraging the narrative that these efforts are directed against the US, or were primarily an answer to Trump, Europeans aim to empower Europe as an actor in its own right. In the technological realm, this led to the idea of European digital sovereignty, the aim of which is to build up European technological capabilities. Although European digital sovereignty is not specifically targeted at the US, it has led, among other things, to efforts such as the possible regulation of American technology companies and concerns over American firms acquiring European start-ups. European campaigners and some policymakers believe US tech giants such as Google, Apple, Facebook, and Amazon are forces to protect against. European thinking on technology partly developed in opposition to the US and US companies. Thus, European efforts to build up digital sovereignty may impede transatlantic cooperation. The EU’s effort to strengthen ethical AI, and to make ‘trustworthy AI’ a unique selling point for Europe, might also end up creating problems for transatlantic cooperation. Many EU policymakers believe that the EU’s insistence on ethical AI will eventually become a location advantage for Europe (much like data privacy): as more people become concerned about unethical AI and data security, they will prefer to use or buy AI ‘made in Europe’ rather than elsewhere. In this respect, two European aims are at odds with each other: on the one hand, Europeans want to ensure that AI is developed and used in an ethical way. Partnering with a powerful player such as the US on this matter should be an obvious way to help them achieve this goal. However, if the EU considers ethical AI not just a goal for humanity but a development that may also create commercial advantages for Europe, then transatlantic cooperation on this issue is counterproductive, as it would undermine Europe’s uniqueness. Finally, many Europeans have expressed scepticism about the extent to which Europe and the US are indeed aligned on ethical AI principles. For example, the Danish national AI strategy argues for a common ethical and human-centred basis for AI. It describes ethical AI as a particularly European approach: “Europe and Denmark should not copy the US or China. Both countries are investing heavily in artificial intelligence, but with little regard for responsibility, ethical principles and privacy.” Many Europeans feel that the US “has no idea how to regulate” cyberspace and continues to show little enthusiasm for doing so. The EU, however, likes to think of itself as a trailblazer when it comes to digital rights, such as the 2014 “right to be forgotten” or the 2018 General Data Protection Regulation. Differing views on China As noted, only a few European states look at AI through a geopolitical lens, and EU efforts on this matter focus primarily on strengthening the EU as a global player. This means that the American interest in using transatlantic cooperation as a means to curb Chinese power is likely to have only limited traction in Europe. And US companies, rather than Chinese ones, currently remain the primary ‘other’ for Europe to measure itself against. European regulation efforts still concentrate on US companies rather than Chinese firms. In light of recent changes in language on China in both NATO and the EU, which describe the country as a “strategic competitor” and “systemic rival”, European and American views of China may converge eventually. But, at the moment, Europeans do not feel the same urgency as the US when it comes to pushing back against China. Unfortunately for those in the US who favour greater transatlantic cooperation, the European nation that most often thinks in geopolitical terms, France, is among those most sceptical of the US.

### VS BioTech

#### The United States federal government should substantially increase its unilateral security measures in biotechnology by [doing the aff]

#### That solves – US action alone is sufficient to solve

J. Stephen Morrison and Katherine E. Bliss, 21, (J. Stephen Morrison and Katherine E. Bliss, Senior Vice President and Director, Global Health Policy Center, Katherine is Senior Fellow and Director, Immunizations and Health Systems Resilience, Global Health Policy Center 4-14-2021, Center for Strategic & International Studies, The Time Is Now for U.S. Global Leadership on Covid-19 Vaccines, https://www.csis.org/analysis/time-now-us-global-leadership-covid-19-vaccines, 6-24-2022) SCade

A Pivot Point of U.S. Confidence

The United States should launch a signature global initiative on Covid-19 vaccine supply, delivery, and demand, propelled by high-level U.S. diplomacy and combined with a robust strategy with concrete, quantifiable goals. The Biden administration is on track to reach a pivot point of confidence in managing the domestic epidemic over the course of the summer, and it should seize that opportunity to escalate its international engagement while attending to the ongoing domestic challenges and making the case for U.S. global engagement to the American people. The Biden administration has already taken important steps to support the global vaccination effort but should do more, quickly, to lay the diplomatic and operational groundwork, leveraging the global leadership role of the Office of the President and President Biden’s personal commitment. The administration should signal its intent to begin to scale up the sharing of vaccine doses with lower- and middle-income countries, beginning at the earliest possible moment and accelerating through the fall. It should work with international partners to develop an international coalitional effort to bring greater transparency and accountability to the global vaccine marketplace and to create voluntary incentives for technology transfer to increase regional manufacturing capacity. It should prioritize improving production, quality control, and pricing to ensure equitable access to vaccines. And it should spearhead innovations that will strengthen partner country readiness and increase public trust and confidence in vaccines and vaccine demand. These are fundamentally ethical, economic, and national security matters. Concerted U.S. action internationally will strengthen the protection of Americans at home but also lift the threat posed by the pandemic to the world’s most vulnerable populations, expedite the reopening of the global economy, and enhance U.S. influence in shaping solutions that align with U.S. values and interests. These goals can be advanced while epidemic controls are consolidated at home. And even in the setting of a successful domestic vaccination campaign, failure to adequately address critical vaccine shortages abroad means extended time periods for Covid-19 transmission globally. This longer pandemic window will accentuate human suffering, hamper global economic development, continue to limit international travel for at least the next one to two years, and increase the risk of vaccine-escape variants that can undermine control in the United States and globally.

### VS Cyber

#### The United States federal government should substantially increase its unilateral security measures in the realm of cybersecurity by [doing the aff]

#### The US is miles ahead of the competition – but refuses to use its capabilities – the CP resolves that without involving NATO

Joseph Marks, 21, (Joseph Marks, Anchor of The Cybersecurity 202 newsletter, 6-28-2021, Washington Post, Analysis, https://www.washingtonpost.com/politics/2021/06/28/cybersecurity-202-united-states-is-still-number-one-cyber-capabilities/, 6-24-2022) SCade

The United States remains by far the world’s most cyber-capable nation with no major competitors for the title. That’s the conclusion from a mammoth 182-page report released today by British think tank the International Institute for Strategic Studies that reviews the cyber capabilities of 15 of the world’s biggest players in hacking and digital defense. The report assesses both government and private-sector capabilities. The report relegates the most troublesome U.S. adversaries, Russia and China, to a second tier of cyber powers. That group also contains the United Kingdom, Canada, Australia, Israel and France. However, China’s rapid digital development and its growing slate of technology firms make it “the only state currently on a trajectory to join the U.S. in the first tier of cyber powers,” the authors warn. The report marks a major endorsement for U.S. cyber capabilities, which have been called into question by a string of major cyberattacks by Kremlin-linked hackers and Russia-based cybercriminals. It also comes as U.S. officials are struggling to temper the global growth of Chinese tech firms, which they fear could give Beijing a critical edge in cyber competition. “China has made significant progress in bolstering its capabilities since 2014, but nowhere near enough to close the gap with the U.S.,” said IISS Senior Fellow for Cyber, Space and Future Conflict Greg Austin. “The main reason is the relative standing of the two nations’ digital economies, where the U.S. remains far advanced despite China’s digital progress.” Yet all of the U.S. advantages in cyberspace haven’t kept it safe. American companies and government agencies are being pummeled by less capable nations — including not just Russia and China but also Iran and North Korea. And U.S. government hackers are less likely to punch back because they’re trying to follow rules of good behavior in cyberspace that their adversaries ignore, according to the report. “The ways in which the U.S. wields its cyber power appear politically and legally constrained when compared with its main cyber adversaries,” the report notes. It adds that “factors have combined to give the adversaries of the U.S. an edge in the use of unsophisticated cyber techniques that are aimed at subversion but pitched below the legal threshold for an act of aggression that might justify an armed response.” In other words, U.S. officials can't legally justify responding to most adversary hacks by counterpunching with traditional arms or cyberattacks. But more measured responses, such as economic sanctions and indicting hackers, have done little to deter adversaries. IISS places Iran and North Korea in a third tier of cyber capability along with India, Japan, Indonesia and Malaysia.

## 2NC

### 2NC---US Leadership Key

#### Only the US has ethical AI standards – key to set norms globally and counteract bad norms by Russia and China

David H. Freedman, 21, (David H. Freedman, 9-15-2021, Newsweek, The U.S, is the only nation with ethical standard for AI weapons. Should we be afraid?, https://www.newsweek.com/2021/09/24/us-only-nation-ethical-standards-ai-weapons-should-we-afraid-1628986.html, 6-26-2022) SCade

Even if military AI systems work exactly as intended, is it ethical to give machines the authority to destroy and kill? Work, the former defense deputy secretary, insists the U.S. military is strictly committed to keeping a human decision-maker in the "kill chain" so that no weapon will pick a target and fire on its own without an OK. But other nations may not be as careful, he says. "As far as we know, the U.S. military is the only one that has established ethical principles for AI." Twenty-two nations have asked the United Nations to ban automated weapons capable of operating outside human oversight, but so far no agreements have been signed. Human Rights Watch and other advocacy groups have called for similar bans to no avail. If Russia, China and others give AI weapons the authority to choose targets, the U.S. may face a choice: go along or operate at a military disadvantage. That sets up a race-to-the-bottom in which the least ethical or most careless adversary—one that is most aggressive about fielding AI-enabled weaponry, regardless of reliability and safeguards—forces others to follow suit. Nuclear weapons could be placed under the control of flawed AI systems that watch for signs that someone else's AI nukes are about to launch. AI is "increasing the risk of inadvertent or accidental escalation caused by misperception or miscalculation," says James Johnson, a foreign-policy researcher at Ireland's Dublin City University and author of Artificial Intelligence and the Future of Warfare. (Manchester University Press, September 2021).

### 2NC---NATO Fails in AI

#### Too many operational constraints and interoperability challenges for NATO’s AI Adoption

Dr. Sanur Sharma, 22, (Dr. Sanur Sharma, Dr Sanur Sharma is Associate Fellow at Manohar Parrikar Institute for Defence Studies and Analyses., 6-26-2022, Eurasia Review, NATO’s AI Push And Military Implications – Analysis, https://www.eurasiareview.com/30052022-natos-ai-push-and-military-implications-analysis/, 6-26-2022) SCade

NATO’s AI Adoption: Challenges and Limitations

The influence of AI on NATO comes with a set of opportunities, challenges and risks. Its adoption process has been incremental and prescriptive. The rising geopolitical conflicts and the use of AI in such conflicts have required the establishment of a dynamic ecosystem to support interoperability. The military adoption of AI requires an innovation ecosystem that is self-sufficient, supports deterrence and resilience, and encompasses the strategic innovation process. NATO’s AI strategy raises many concerns related to the AI-driven autonomous weapon systems, as it does not adequately address the development of such systems, its deployment and governance. The AI strategy mostly talks about the ethical and responsible use of AI and has omitted the challenges related to the use of lethal autonomous weapon systems. For the US, its priorities lie in ensuring responsible use of AI-enabled systems with their allies for operational and data sharing. It remains to be seen if all the 30 NATO states agree on the same rules and would be willing to agree on practical guidelines for the operational use of AI-enabled systems. Another challenge for NATO is to standardise rules for all member states in dealing with AI-enabled autonomous weapon systems. Countries like Turkey are working on autonomous weapons and have developed AI-enabled loitering munitions. Turkey has requested the US for upgraded F-16 fighter jets that are said to be AI-enabled.25 The Biden Administration has asked the Congress to approve the upgrade of Turkey’s F-16 fighter jet fleet.26 Turkey’s armed drones have also been used in the Ukraine conflict. For smooth functioning of such systems, it will be necessary for all NATO members to have standardised rules when it comes to deployment of such systems. Also, there is no transparent allocation of roles for different NATO bodies, and “no dedicated line of funding” for its AI strategy.27 The finances are shared through multiple funding like NATO Innovation Fund and DIANA which manages funding for various other projects leading to uncertainty over availability of funds and budget cuts. This will be a significant challenge for the effective implementation of the AI strategy.28 Some other challenges with the adoption of AI strategy through innovation include fragmented national innovation initiatives, allied technological categorisation and digitisation gaps, speed of adoption and spending levels and the underuse of NATO’s mechanisms to undertake collaborative defence innovation.29 NATO will also have to focus on the vulnerabilities and intrusion issues with the AI-enabled systems and will need to set up dedicated centres for AI development and testing in order to maintain a test-safety regime for systems-of-systems employed using AI. The challenges related to AI use in wars and geopolitical conflicts need to be addressed to generate confidence in the use of such systems. Additionally, testing mechanisms and accuracy standards need to be implemented for system components. Policymakers need to address the operational risks and ethical considerations of employing AI in military systems.

#### NATO is ill-equipped for AI warfare – ambiguity and lack of norms

Jill Aitoro, 18, (Jill Aitoro, 2-17-2018, Defense News, AI warfare is coming, and some global leaders say NATO isn’t ready, https://www.defensenews.com/smr/munich-security-forum/2018/02/16/ai-warfare-is-coming-and-some-global-leaders-say-nato-isnt-ready/, 6-24-2022) SCade

The future of warfare will involve artificial intelligence systems acting as lethal weapons, and much like cyber a decade ago, NATO allies are ill-equipped to manage the potential threat, said current and former European leaders speaking at the Munich Security Conference. Kersti Kaljulaid, president of Estonia, estimated a 50 percent chance that by the middle of this century we will have an AI system capable of launching a lethal attack. And yet, just as the world was not prepared for a cyberattack when Russia first launched a cyberattack against Estonia in 2007 — bombarding websites of Estonian parliament, banks, ministries, and news outlets — there is no strategy or international law to deter such tactics of warfare. First, “we need to understand the risks — what we’re afraid of,” said Kaljulaid,, pointing to three: someone using AI disruptively; intelligence going widespread; and AI depleting energy. “Right now we know we want to give systems some right of auto decision-making when it has the necessarily information to react,” Kaljulaid said. But once that is accomplished, “then we have the responsibility” to establish standards — the ability to apply reporting requirements to AI system, or to even shutdown systems if they are deemed threatening. The kind of standards gradually being put in place for cybersecurity “need to apply to the AI world, exactly the same way,” she said. For such standards to potentially be established for AI, there must be acceptable models of use in combat, and in conjunction with that, when there is evidence that AI is deployed outside those established boundaries, there must be a right to intervene. And much like nuclear non-proliferation efforts, “if we say that we will have the right to intervene, we have to have the right to international inspection,” Kaljulaid said. Among the standards advocated by Anders Fogh Rasmussen, former NATO secretary general, is that AI always involve human beings. There are three options, he said during the panel: humans can be in charge, always “in the loop;” humans can be “on the loop” through a supervisory role, able to intervene; or humans can be “out of the loop” – telling the system to attack, and then leaving the rest to the machine. “I’m in favor of trying to introduce legally binding [standards] that will prevent production and use of these kinds of autonomous lethal weapons,” Rasmussen said, strongly advocating for a human role. But such standards don’t come fast. It took until 2017 for NATO to declare that a cyberattack would spur an Article 5 response – that being, collective defense among allies — after a massive computer hack paralyzed portions of government and businesses in Ukraine before spreading around the globe. In the meantime, much like cybersecurity, AI presents an opportunity for Russia as well as China to use “grey zones,” said Rasmussen – not initiating open military conflict, but provoking allies enough to disrupt.

### 2NC---Vaccines Solvency

#### The US has lead the international vaccine effort – we just need funding to finish strong

Atul Gawande, 22, (Atul Gawande, Atul Gawande leads global health and is co-chair of the Covid-19 Task Force at the U.S. Agency for International Development., 3-30-2022, Office Of Press Relations Usaid.Gov, Washington Post Opinion: 'Failing to fund the U.S. covid response bodes trouble for the entire world' by Atul Gawande, https://www.usaid.gov/news-information/press-releases/mar-30-washington-post-opinion-failing-fund-us-covid-response-bodes-trouble-entire-world, 6-27-2022) SCade

Nearly a year ago, President Biden announced that the United States would be the “arsenal of vaccines for the world,” just as America served as an arsenal for democracies during World War II. With the president’s leadership and the consistent bipartisan support of Congress, the United States has delivered more than half a billion coronavirus vaccines to 114 lower-income countries free of charge, a historic accomplishment. This example spurred contributions from other wealthy nations and contributed to vaccination of almost 60 percent of the world. But the global battle against covid-19 is not done. Instead, the challenge has changed. The lowest-income countries, where vaccinations have reached less than 15 percent of people, are now declining free vaccine supply because they don’t have the capacity to get shots in arms fast enough. We must therefore not just provide an arsenal; to protect our allies against future variants, we must also provide the support they need to ramp up their vaccination campaigns. That effort requires money, and despite generously funding our covid-19 response up to this point, Congress is now failing to provide the resources we need.

#### The US has the capacity to be the global leader in vaccine distributions and production – COVID proves

J. Stephen Morrison and Katherine E. Bliss, 21, (J. Stephen Morrison and Katherine E. Bliss, Senior Vice President and Director, Global Health Policy Center, Katherine is Senior Fellow and Director, Immunizations and Health Systems Resilience, Global Health Policy Center 4-14-2021, Center for Strategic & International Studies, The Time Is Now for U.S. Global Leadership on Covid-19 Vaccines, https://www.csis.org/analysis/time-now-us-global-leadership-covid-19-vaccines, 6-24-2022) SCade

Preface It is in the United States’ strategic interests to ensure that the world mobilizes effectively to end the SARS-CoV-2 pandemic. A proactive U.S. role is essential to secure the gains underway in the United States and ensure Americans’ health, safety, and prosperity into the future. Helping to secure the future of lower- and middle-income countries is also simply the right thing to do, on humanitarian, economic, and security grounds. Today, the United States is quickly approaching a moment of genuine promise, when exceptionally effective vaccines, accelerated distribution at home, and an enlarged American vaccine industrial base open the door for the Biden administration to bring American leadership to urgent global vaccine challenges. The United States’ health, economic, and national security interests argue for seizing this moment, beginning with presidential leadership to explain the stakes to Americans still legitimately worried about the epidemic at home. The United States ignores at its own peril the acute threat posed by viral variants, geopolitical rivals who take advantage of the moment, and deep vaccine inequity around the world. By sharing American vaccine resources starting at the soonest possible moment, the United States can claim ascendancy against these risks. That essential step should be part of a four-part U.S. diplomatic strategy that will: Bring order to the Covid-19 vaccine marketplace; Expand global Covid-19 vaccine supply, including by enhancing manufacturing capacity; Build local Covid-19 vaccine distribution capacity; and Strengthen global demand for Covid-19 vaccines. A Pivot Point of U.S. Confidence The United States should launch a signature global initiative on Covid-19 vaccine supply, delivery, and demand, propelled by high-level U.S. diplomacy and combined with a robust strategy with concrete, quantifiable goals. The Biden administration is on track to reach a pivot point of confidence in managing the domestic epidemic over the course of the summer, and it should seize that opportunity to escalate its international engagement while attending to the ongoing domestic challenges and making the case for U.S. global engagement to the American people. The Biden administration has already taken important steps to support the global vaccination effort but should do more, quickly, to lay the diplomatic and operational groundwork, leveraging the global leadership role of the Office of the President and President Biden’s personal commitment. The administration should signal its intent to begin to scale up the sharing of vaccine doses with lower- and middle-income countries, beginning at the earliest possible moment and accelerating through the fall. It should work with international partners to develop an international coalitional effort to bring greater transparency and accountability to the global vaccine marketplace and to create voluntary incentives for technology transfer to increase regional manufacturing capacity. It should prioritize improving production, quality control, and pricing to ensure equitable access to vaccines. And it should spearhead innovations that will strengthen partner country readiness and increase public trust and confidence in vaccines and vaccine demand. These are fundamentally ethical, economic, and national security matters. Concerted U.S. action internationally will strengthen the protection of Americans at home but also lift the threat posed by the pandemic to the world’s most vulnerable populations, expedite the reopening of the global economy, and enhance U.S. influence in shaping solutions that align with U.S. values and interests. These goals can be advanced while epidemic controls are consolidated at home. And even in the setting of a successful domestic vaccination campaign, failure to adequately address critical vaccine shortages abroad means extended time periods for Covid-19 transmission globally. This longer pandemic window will accentuate human suffering, hamper global economic development, continue to limit international travel for at least the next one to two years, and increase the risk of vaccine-escape variants that can undermine control in the United States and globally. Why act now? The situation at home is changing fundamentally and rapidly. The United States possesses several exceptionally safe and effective vaccines, production is scaling up, and supply stockpiles will soon exceed domestic demand. The rapidly expanding domestic vaccine rollout is laying the groundwork for an exit out of the acute phase of the epidemic at home, at the same time that portions of the $1.9 trillion American Rescue Plan are consolidating the core components of the U.S. domestic response. Confidence is rising steadily that the United States will soon have the suite of tools needed to control the epidemic at home over the summer and stabilize and reopen the economy and society by fall. These promising changes, arriving more quickly than originally anticipated, open the door for increased U.S. engagement globally. At home, leaders will still need to address the risk of a spring surge and the threat of vaccine-escape variants; plan to vaccinate older children by late summer and younger children by late 2021 and into 2022; address the possible manufacturing and distribution of booster shots and recurrent vaccines; continue to urge masking and social distancing measures and also find and stop clusters; and answer the questions of Americans who have concerns about vaccine safety or refuse to accept them. The race will continue to resolve scientific unknowns (e.g., how effectively vaccines stop infectious transmission by variants, including those that have not yet emerged; and how long immunity lasts). But with the rapid deepening of U.S. capacities and the expansion of vaccine coverage, the United States is in a much better position to manage these challenges—and engage more intensively outside its borders.

#### The US is a leader in biotech but needs strong action to revitalize it and level the global playing field

Joe Kennedy, 18, (Joe Kennedy, Joe Kennedy is a senior fellow at the Information Technology and Innovation Foundation, where he focuses on economic issues., 5-7-2018, STAT, Strong action is needed to preserve the competitiveness of America's life-science industries, https://www.statnews.com/2018/05/07/life-sciences-america-preserve-competition/, 6-24-2022) SCade

Living standards in the United States increasingly depend on the competitiveness of industries that compete internationally, particularly those that succeed by producing new innovations. The life-science sector, which includes pharmaceuticals, biotechnology, and medical devices, is one of those industries. It is also an American success story: Our country captures more than 40 percent of the world’s major patents in both pharmaceuticals and medical devices. But as I describe in a new report written for the Information Technology and Innovation Foundation, the continued health of the U.S. life-sciences sector is at risk because a growing number of foreign competitors are making determined efforts to gain global market share, often using unfair tactics. The importance of the life-science sector for the U.S. economy is difficult to overstate. It employs more than 1.2 million U.S. workers, with average wages ranging from $124,400 in pharmaceuticals to $86,200 in medical devices. And unlike U.S. manufacturing, where the number of jobs has fallen over the last 15 years, the number of life-science jobs has been steadily growing. U.S. pharmaceutical firms invest more in research and development as a share of value added — 43.8 percent — than any other industry. In fact, they invest a higher share than any other nation in the world, accounting for more than half of all private-sector pharmaceutical research and development among countries in the Organization for Economic Co-operation and Development. This is one reason the American life-sciences sector is highly competitive, and helps explain why the U.S. is home to the most company headquarters and its researchers develop the most new drugs and devices. But other countries, including China, Ireland, Singapore, India, and the United Kingdom, are quickly gaining ground. They are doing so with policies aimed at increasing the competitiveness of their life-sciences industries. Some of these efforts, such as greater investment in research and better intellectual property protection, benefit the cause of life-sciences innovation globally. But other policies harm both the global quest for innovation in drugs and devices and the U.S. economy. India and several other countries, for example, maintain high tariffs on some medical devices. Exporters to China must deal with regulatory delays, routine violations of intellectual property rights, and rampant counterfeiting. Perhaps more surprising, the International Trade Administration recently concluded that pharmaceutical innovations have effectively become un-patentable in Canada. These practices and more hurt U.S. companies by closing off export markets. The trend is one reason why the U.S. trade deficit in life sciences has been growing. In pharmaceuticals, the United States ran a deficit last year of $56.2 billion; in medical devices it was more than $4 billion. A compounding factor has been the widespread practice of governments around the world to use their monopsony power to negotiate artificially low prices. Because some revenue is better than no revenue, U.S. companies have little choice but to accept these deals. But the forced discounting drives down export values, which drives up the U.S. trade deficit. This manipulation of the trading system could be responsible for around 40 percent of the pharmaceutical industry’s trade deficit. Moreover, by not paying U.S. firms for the full cost of the drugs that they use, other nations are dramatically slowing the global pace of life-sciences innovation, because lower revenues limit the industry’s ability to conduct the research necessary to discover the next round of new treatments. Any effective U.S. life-sciences innovation policy needs to make leveling the global playing field a top priority. This means taking more forceful action to address unfair trade practices that harm the industry and the jobs it supports. Here are three good places to start: Penalize nations that engage in life-sciences mercantilism by removing them from the Generalized System of Preferences, which eliminates duties on thousands of products entering the United States from 120 countries and territories. Ensure the existence of strong intellectual property protections for life-science products, including biological drugs, in all new or renegotiated trade agreements. Increase pressure on foreign nations to stop free riding on the United States when it comes to life sciences and innovation by increasing payments for drugs. Better trade policy, while necessary, won’t be sufficient to preserve the competitiveness of America’s life-science industries. We need stronger policies at home, too. The White House should establish an interagency life-sciences competitiveness council to ensure that all agencies, including the National Institutes of Health, the Food and Drug Administration, the United States Trade Representative, and the Department of Health and Human Services, take U.S. life-sciences competitiveness issues into consideration in everything they do. These efforts could include negotiating lower trade barriers, streamlining regulations, and more effectively spurring the commercialization of federal research.

### 2NC---Norms Fail

#### Cyber signaling and norms are impossible – NATO is unneeded

Ian Hurd, 19, (Ian Hurd, 4-23-2019, Houston Law Review, "If I Had a Rocket Launcher": Self-Defense and Forever War in International Law, https://houstonlawreview.org/article/7952-if-i-had-a-rocket-launcher-self-defense-and-forever-war-in-international-law, 6-26-2022) SCade

Its history can also be told through the changing uses of law in the political practice of justification. The legal formulations that were once thought to enclose war fully within self-evident and constraining legal categories have turned inside out and now operate to disperse military action throughout the world. As national interests and military technologies have changed, the rules have adapted, both in ratione temporis and ratione materiale. The instrumental utility of expansive self-defense claims for powerful governments is great, and the power of state practice to redefine international law is well-accepted—together these two facts ensure that the operative understanding of international rules will not deviate far from the desires of strong states. As the rule has moved, so has its political effects. Today it serves to legitimize and legalize the turn to “endless war” that has characterized American foreign policy since 2001. With self-defense now anchored on national security interests, it has released its former connections to time and to armed attack. From this new foundation, it became useful to ambitious governments who are eager to attack their enemies abroad. In self-defense defined as national security, these states found a legal justification that matched neatly with their new technologies of drones and cyber. Together, these tools encouraged those with the capabilities to engage in undeclared and perhaps never-ending military operations against those whom they see as enemies of the state. The history of self-defense helps to show the gap between the mythology of international law and its practical life. The myth says that international law provides a stable framework of rules that enable states to act toward their objectives while limiting their capacity to engage in acts that are damaging to the entire community. The reality is that rules become tools which powerful actors aim to use to their advantage. As Rebecca Sanders asserts, “There is nothing inherently progressive about legal culture[]” or international law.[82] The political effects of law depend on who is using it against what and against whom.

#### States will self-restrain, regardless

Miguel Alberto N. Gomez, 18, (Miguel Alberto N. Gomez, 11-6-2018, Foreign Policy, In Cyberwar, There Are Some (Unspoken) Rules, https://foreignpolicy.com/2018/11/06/in-cyberwar-there-are-some-unspoken-rules-international-law-norms-north-korea-russia-iran-stuxnet/, 6-26-2022) SCade

Wheeler correctly presents cyberspace as a vulnerable domain that continues to lack a set of norms that regulates aggressive tendencies. But that doesn’t mean that state actors will immediately take the opportunity to fully exploit this situation to further their interests. They are acutely aware of the consequences of overly aggressive cyberoperations and therefore actively attempt to limit the impact of their activities by either narrowing the scope of their operations or resorting to techniques that do minimal damage and are easily contained.

### 2NC---NATO slow

#### Unilateral action is faster – NATO requires broad consensus and debates – their impacts happen before then

NATO, 22, (Nato, 6-14-2022, NATO, Consensus decision-making at NATO, https://www.nato.int/cps/en/natolive/topics\_49178.htm, 6-27-2022) SCade

Applying the principle of consensus decision-making Consensus decision-making is a fundamental principle which has been accepted as the sole basis for decision-making in NATO since the creation of the Alliance in 1949. Consensus decision-making means that there is no voting at NATO. Consultations take place until a decision that is acceptable to all is reached. Sometimes member countries agree to disagree on an issue. In general, this negotiation process is rapid since members consult each other on a regular basis and therefore often know and understand each other's positions in advance. Facilitating the process of consultation and consensus decision-making is one of the NATO Secretary General's main tasks. The principle of consensus decision-making applies throughout NATO.

### 2NC---LAWS Good

#### US unilateral pursuit of LAWs propels the military past China and Russia

Jay Ettinger, 20, (Jay Ettinger, Jay is JD & Legal Intern, UN High Commissioner for Human Rights, Fall 2020, “Overcoming International Inertia: The Creation of War Manual for Lethal Autonomous Weapons Systems,” Minnesota Journal Of International Law, https://minnjil.org/wp-content/uploads/2021/09/Ettinger-MACRO.pdf, 6-27-2022) SCade

Second, LAWS have the potential to offer a much greater military advantage than previously banned weapons.152 Historically, the major military powers have been cautious to limit their military options through international treaties, particularly when the treaty involves strategically important weapons.153 A number of experts believe that AI functionality will have a revolutionary impact on warfare.154 LAWS technology has the potential to create a significant competitive asymmetry for the State that can first successfully develop the technology.155 In fact, the U.S. Military has explicitly stated that its goal for AI development is to create “an enduring competitive edge that lasts a generation or more.”156 This significant first mover advantage has created a high-degree of competition in LAWS development, in particular between the United States, Russia, and China.157 All three are heavily invested in LAWS development and view it “as fundamental to the future of armed conflict.”158 Some conceptualize this competition as an “AI arms race.”159 Each major military power is concerned that attempts to limit or outright ban LAWS development may put them at a competitive disadvantage if their peer States are not party to the treaty or do not abide by the treaty obligations.160 Even if all major military States were party to the treaty, the prohibition on LAWS development would be challenging to enforce due to the dual use (civilian and military) functionality of AI technology.161 This would make it difficult for an overseeing treaty body to ensure that States were complying with their treaty obligation not to develop AI technology for LAWS purposes.

### 2NC---LAWS Norms Fail

#### Multilateral norms on LAWS fail – the US acting unilaterally is best since it sends a strong signal that spills over internationally

Jay Ettinger, 20, (Jay Ettinger, Jay is JD & Legal Intern, UN High Commissioner for Human Rights, Fall 2020, “Overcoming International Inertia: The Creation of War Manual for Lethal Autonomous Weapons Systems,” Minnesota Journal Of International Law, https://minnjil.org/wp-content/uploads/2021/09/Ettinger-MACRO.pdf, 6-27-2022) SCade

2.Challenges to a Multilateral Treaty Banning LAWS Development and Use The near-term prospects of a multilateral treaty banning LAWS development and use—which includes the major military powers—are not great. Two of the most significant challenges facing the ban are (1) the uncertain legal status of the technology145 and (2) the potential military advantage of LAWS146 in combination with the competitive pressure from rival States.147 The powerful influence of these factors and the early stage nature of LAWS development create highly unfavorable conditions for the creation of a treaty banning LAWS development and use. Evaluating the impact of each of the aforementioned challenges indicates that there are key differences that distinguish a LAWS ban from prior successful weapons bans, such as the ban on anti-personnel landmines or blinding lasers.148 First, LAWS’ incompatibility with IHL obligations, as surveyed in the section above, is not as clear as previous weapons. For example, anti-personnel land mines faced more significant challenges with IHL compliance due to the operator’s inability to control the impact of the explosives and the operator’s inability to distinguish between combatants and noncombatants.149 Even when banning this more legally problematic weapon, the United States, China, Russia, and India still declined to sign the treaty.150 As discussed previously, at a minimum LAWS have the potential to adhere to IHL obligations in some battlefield contexts.151 Therefore, the legal basis supporting a total ban on LAWS is not as strong as the previous examples.

### A2: US Not Leading AI

#### US ahead in AI compared to all other countries – patents and timeline prove.

Greg Hadley, 22, (Greg Hadley, 6-4-2022, Air Force Magazine, US Remains Leader in Emerging Technologies, But China Makes Some Gains, Study Finds, https://www.airforcemag.com/us-remains-leader-in-emerging-technologies-but-china-makes-some-gains-study-finds/, 6-24-2022) SCade

When it comes to key emerging technologies like additive manufacturing, artificial intelligence, and space, the U.S. remains the leader in innovation, according to a new study prepared for the Air Force. Analyzing hundreds of million of patent applications from across the world, the report from the RAND Corp. found that in six areas—Additive manufacturing (AM), AI, space, quantum, ceramics, and sensors—where there have been surges in interest over the past few decades, U.S. inventors have typically been “first to file in areas of technological emergence, far more often than other countries,” the report states. That lead in patent applications has held up even against China, which Pentagon and Air Force officials have repeatedly called their pacing challenge and main priority.

#### AND the US is receiving record investment in AI

\*mega rounds are just anytime companies raise more than $100 million in a round of fundraising

CB, 21, (Cb Insights Research, 8-4-2021, Researchbriefs, The United States of Artificial Intelligence, https://www.cbinsights.com/research/artificial-intelligence-startup-us-map/, 9-15-2021) SCade

Startups in 46 US states plus DC are applying artificial intelligence tech across industries like marketing, healthcare, retail, and more. Despite sustained global uncertainty caused by the Covid-19 pandemic, the artificial intelligence sector is shattering funding records this year, garnering $38B in H1’21 — already surpassing the $36B raised in 2020. The industry is maturing at a blistering pace. A number of new records were achieved in Q2’21, including 50 mega-rounds, 24 new AI unicorns, and 119 exits. Notable events include Waymo’s $2.5B funding round, UiPath’s $29B IPO, and Microsoft’s $19.7B acquisition of Nuance. Investors are betting on AI tech across the country. Using CB Insights data, we mapped out the top-funded AI startup in every US state. Collectively, these startups have raised more than $10.3B in disclosed equity funding, with leading companies including Databricks ($1.9B in disclosed equity funding), Tanium ($1.17B), and Indigo Ag ($1.15B).

### A2: China outpacing US in AI

#### China has not outpaced the US in AI but is on track to do so

Daniel Castro and Michael Mclaughlin, 21, (Daniel Castro and Michael Mclaughlin, 1-25-2021, Who Is Winning the AI Race: China, the EU, or the United States? — 2021 Update, https://itif.org/publications/2021/01/25/who-winning-ai-race-china-eu-or-united-states-2021-update, 9-15-2021) SCade

China’s AI capabilities relative to the European Union and the United States have improved in several ways. First, China has surpassed the EU as the world leader in AI publications. Second, the quality of its AI research has generally trended upward year to year. Third, its software and computer services firms have increased their R&D spending. Fourth, China now has nearly twice as many supercomputers ranked in the top 500 for performance as the United States—the United States led in this indicator as recently as 2017. Finally, China likely continues to lead in the amount of data generated. Overall, however, China has not significantly reduced the gap in AI between itself and the United States, but its trend of consistent progress could eventually evaporate the U.S. lead.

#### The US is beating China in AI right now – unilateral push is key to maintain lead

Ryo Nakamura, 21, (Ryo Nakamura, 7-15-2021, Nikkei Asia, AI arms race: US to deploy $1.5bn to compete with China, https://asia.nikkei.com/Politics/AI-arms-race-US-to-deploy-1.5bn-to-compete-with-China, 6-27-2022) SCade

WASHINGTON -- Since the Pentagon's Defense Advanced Research Projects Agency, or DARPA, began shaping the so-called "first wave" of artificial intelligence in the 1960s, the U.S. has been leading the world in AI adoption. In the ensuing five decades, AI has moved from machines carrying out human-programmed rules to statistical learning, the second wave, and now to a third wave that brings forth machines that understand and reason in context. In future battlefields, machines will function more as colleagues than as tools, DARPA says. "But obviously, we aren't the only ones who understand the promise of AI," Secretary of Defense Lloyd Austin said Tuesday in a speech at an international conference organized by the National Security Commission on Artificial Intelligence. "China's leaders have made clear that they intend to be globally dominant in AI by the year 2030," he noted. To win the AI arms race with China, the U.S. will spend nearly $1.5 billion on artificial intelligence research and development over the next five years, Austin said. "Beijing already talks about using AI for a range of missions, from surveillance to cyberattacks to autonomous weapons. And in the AI realm, as in many others, we understand that China is our pacing challenge," Austin said. "And we're going to compete to win, but we're going to do it the right way."

### A2: NATO solves cyber

#### NATO fails – too many areas of disagreement and interoperability of cyber operations poses too many problems

Erica D. Lonergan and Mark Montgomery, 22, (Erica D. Lonergan and Mark Montgomery, Dr. Erica Lonergan (née Borghard) is an assistant professor in the Army Cyber Institute at West Point. She is also a research scholar at the Saltzman Institute of War and Peace Studies at Columbia University. Erica previously served as a senior director on the Cyberspace Solarium Commission. Retired Rear Admiral Mark Montgomery, US Navy, is the senior director of the Center on Cyber and Technology Innovation at the Foundation for Defense of Democracies. Mark previously served as the executive director of the Cyberspace Solarium Commission., 1-25-2022, Modern War Institute, Pressing Questions: Offensive Cyber Operations and NATO Strategy, https://mwi.usma.edu/pressing-questions-offensive-cyber-operations-and-nato-strategy/, 6-24-2022) SCade

Next Steps: Addressing Challenges and Mitigating Risks Given the threat environment facing NATO, as well as the activities of several NATO members, the alliance should deliberately—but purposefully—consider incorporating offensive cyber operations below the level of armed conflict into its deterrence strategy. Any effort to explore a role for offensive cyber operations should also consider the challenges and risks that may come with doing so. A central challenge is that, at the political level, NATO allies lack consensus on the appropriate application of offensive cyber power—especially below the level of armed conflict. Addressing these disagreements among member states is essential because conducting offensive cyber operations often requires maneuvering through or operating on networks controlled by an ally or allies. Right now, NATO members do not collectively agree on the protocols and processes for partner actions in allied networks—and they also disagree on how to define sovereignty in cyberspace, or when an offensive cyber operation would rise to the level of an armed attack. Offensive cyber operations for NATO also present real interoperability challenges. The role of intelligence in cyber operations is likely to complicate NATO planning processes. Even close allies are likely to be wary about sharing sensitive intelligence for a number of reasons. For instance, they may be averse to sharing information gleaned from signals intelligence collection or because a member state may be using the same exploits for both offensive action and their own espionage—including intelligence collection against allies. Or, allies may simply be worried that sensitive information may become exposed. On top of this, it’s challenging to adjudicate intelligence requirements among allies and to deconflict intelligence and military priorities. It is also not clear whether the alliance has established consensus thresholds that specify the conditions and timeline under which a state would have to notify others of its activities on their networks—if at all.

#### Russia hacking US AND NATO now – aff takes too long – unilateral action is quicker

Jack Gillum, 6-22, (Jack Gillum, Jack Gillum Cybersecurity Correspondent, 6-22-2022, Bloomberg, Russian Hackers Also Focused on US and NATO Since Invasion, https://www.bloomberg.com/news/articles/2022-06-22/russian-hackers-also-focused-on-us-and-nato-since-invasion, 6-27-2022) SCade

Russia is expanding its espionage and influence operations against Ukraine and its allies, including malicious cyber activity that requires a coordinated, robust response, Microsoft Corp said in a report published Wednesday. Russia has deployed a three-pronged strategy of coordinated military, cyber and propaganda efforts since it invaded Ukraine in February, Microsoft said. The cyberattacks included "wiper" malware that Russian hackers deployed against Ukrainian computer systems, the company said, and malware masquerading as legitimate emails. Nearly two-thirds of Russian cyber espionage targets outside Ukraine were NATO countries, with nearly half of all campaigns directed at government agencies, according to the report. Russian hackers have most frequently tried to conduct network intrusions against US organizations, with attackers also aiming to breach entities based in Poland, Denmark, Norway, Finland, Sweden and Turkey, the company said. Cyberattacks directed at critical infrastructure accounted for about 19% of the activity. Of the attempted Russian hacking detected by Microsoft since the start of the war, 29% has been successful, according to the report. Roughly a quarter of the successful breaches have resulted in the theft of data, the company said. Data stored on-site is more vulnerable than information in the cloud, according to the report. “The key to a country’s digital resilience in wartime is the ability quickly to move data outside the country while still connecting to and relying on it for a government’s digital operations,” researchers wrote. Meanwhile, Microsoft found, the spread of Russian propaganda has spiked in Ukraine, the US and elsewhere since the war began. Pro-Russian news articles have sought to justify the initial February invasion, explain how Ukraine's revolution led to the war and criticize the countries aligned with Ukraine. “The escalation follows years of unsuccessful talks, broken ceasefire agreements and a standoff between Russia and the West,” according to one article cited as an example in Microsoft’s report. A representative for the Russian embassy in Washington didn’t immediately respond to an email seeking comment Wednesday. The Biden administration has repeatedly warned of cybersecurity threats against US companies and critical infrastructure since the outbreak of the war. US officials have urged companies to update their software and increase threat detection capabilities in the face of Russian aggression in cyberspace, among other recommendations.

### A2: US Not Leading Cyber

#### The US is ahead of every other nation – but lacks the political will

Joseph Marks, 21, (Joseph Marks, Anchor of The Cybersecurity 202 newsletter, 6-28-2021, Washington Post, Analysis, https://www.washingtonpost.com/politics/2021/06/28/cybersecurity-202-united-states-is-still-number-one-cyber-capabilities/, 6-24-2022) SCade

The United States has essentially led the cyber pack since the 1990s. That dominant position is due to many factors including: Dominant military capabilities in both offensive and defensive cybersecurity A world-leading cadre of U.S. technology and cybersecurity companies that help protect domestic industry and foster cyber talent A highly evolved government approach to cybersecurity and managing hacking risks The think tank places Russia and China behind U.S. allies such as the United Kingdom, France and Australia when it comes to investing in protecting industry against cyberattacks. But they’re far ahead of those U.S. allies when it comes to launching offensive hacking operations. “In their development of offensive cyber mass, the scale of their respective operational experience, their proven reach on cyber espionage and the clarity of their political direction and doctrinal thinking, China and Russia probably surpass all other states except the U.S.,” the report states. The most important factor for a country’s overall cyber capability is having a cadre of domestic companies focused on information and communications technology that can develop cyber expertise, the report finds. That’s what gives China, with its raft of growing tech and telecoms firms, the best chance of challenging the United States’ top-tier position. It also means tech-savvy Japan is most likely to move into the second tier, despite being relatively weak in cyber capabilities now.

### A2: NATO Cyber AI

#### NATO is too slow – US is ahead of the curve and sets the pace

Helen Warrell, 21, (Helen Warrell, 6-7-2021, Financial Times, Nato allies need to speed up AI defence co-operation, https://www.ft.com/content/61c1945c-d153-4d58-b9c5-dffd99a6919e, 6-27-2022) SCade

As Russia intensifies cyber hostilities and China weaponises artificial intelligence, joining forces in the field of high-tech warfare will feature high on the list of topics discussed by Nato allies at a summit next week. But the transatlantic alliance’s 30 members will need to move fast if they aim to make up lost ground. Nato is proposing a new tech innovation centre bringing together military personnel with industry to foster digital defence start-ups. Some of these might be financed by a separate initiative, also set to be debated: a venture capital fund for innovation which member states could choose to opt in to. The efforts are belated, as Nato secretary-general Jens Stoltenberg himself acknowledged. “For decades, Nato allies have been leading when it comes to technology, but that’s not obvious any more,” he told the Financial Times in an interview last week. “We see China especially investing heavily in new, disruptive technologies like artificial intelligence, autonomous systems, big data, and they implement them into new advanced weapon systems, drones, submarines, aircraft and so on.” He is not the first to sound the alarm. Eric Schmidt, the former Google chief executive who now chairs the US’s National Security Commission on AI, warned earlier this year that Beijing was planning to undermine conventional military forces by “leapfrogging” to new technologies. The commission’s report, published in March, raised concerns that China would use AI for “reconnaissance, electromagnetic countermeasures and co-ordinated firepower strikes”. Part of the problem is that western defence institutions have been slow to recognise the potential of innovation beyond their own industry. “For decades, a lot of technological development would happen within the defence sector — the internet, nuclear, GPS, all of that was developed by the defence industry and then shared with the civilian sector,” Stoltenberg said. “Now, it goes the other way around. It’s a civilian sector which is leading in the development of artificial intelligence, quantum computing, and many of the new disruptive technologies.” Some Nato members are ahead of others. The US and France have published military AI strategies, while the UK announced this year that it is to establish a centre for defence AI. For the first time, Britain’s intelligence agency, MI6, is recruiting from the private sector for a new head of its “Q” branch — the technical lab made famous in the James Bond films. Establishing a new Nato hub — known as an “accelerator” — in which tech companies and members of the armed forces can experiment with new ideas has advantages, according to Professor Fiona Murray, co-director of MIT’s innovation initiative. Start-ups and investors do not always have the time to tackle defence challenges when solutions are “hard to test, markets are fragmented and procurement is slow”, Murray said. Working together would create a wider market for new products and enhance collective security, she noted. It was “not enough” for countries to be handling this individually, she said. The US has started marshalling allies on the policy implications of using new technology. The Pentagon’s “AI Partnership for Defense”, comprising 13 countries (including Nato members Canada, Denmark, Estonia, the UK, France and Norway) met virtually for the first time last year to agree joint military standards on AI. Schmidt’s commission has called on the Five Eyes intelligence-sharing alliance (the US, UK, Canada, Australia and New Zealand) to work more closely on developing AI systems. Ulrike Franke, an expert in military technology at the European Council on Foreign Relations, argues that Nato’s tech centre will be most effective if it prioritises systems designed to facilitate joint military operations. The alliance should look at areas such as AI-enabled command and control, she said, which could give members a unified picture of the battlefield across multiple regions, using intelligent data analysis to sift information. Franke said that in the vast arena spanning drones to quantum computing, there was a temptation to cover too much. “It makes massive sense for Nato to look more at this [technology]”, she said. “The question is, what exactly are they focusing on? There’s a danger of Nato spreading itself too thin.”

### A2: Montenegro

#### They’re wrong – NATO already incorporated Montenegro – US can still act unilaterally

Pierluigi Paganini, 20, (Pierluigi Paganini, Pierluigi Paganini is member of the ENISA (European Union Agency for Network and Information Security) Threat Landscape Stakeholder Group and Cyber G7 Group, he is also a Security Evangelist, Security Analyst and Freelance Writer. Editor-in-Chief at "Cyber Defense Magazine", Pierluigi is a cyber security expert with over 20 years experience in the field, he is Certified Ethical Hacker at EC Council in London. The passion for writing and a strong belief that security is founded on sharing and awareness led Pierluigi to find the security blog "Security Affairs" recently named a Top National Security Resource for US. Pierluigi is a member of the "The Hacker News" team and he is a writer for some major publications in the field such as Cyber War Zone, ICTTF, Infosec Island, Infosec Institute, The Hacker News Magazine and for many other Security magazines. Author of the Books "The Deep Dark Web" and “Digital Virtual Currency and Bitcoin”., 1-20-2020, Security Affairs, Nato has sent an anti-hybrid war team to Montenegro, https://securityaffairs.co/wordpress/96627/cyber-warfare-2/montenegro-nato-hybrid-attacks.html, 6-27-2022) SCade

The Chairman of the NATO Military Committee announced that the alliance has sent a counter-hybrid team to Montenegro to face Russian hybrid attacks. Last week in Brussels, the Chairman of the NATO Military Committee (MC), Marshal Sir Stuart Peach, announced the effort of the Alliance in facing Russian hybrid attacks. The term “Hybrid warfare” refers to a military strategy which employs political warfare and blends conventional warfare, irregular warfare and cyberwarfare with other influencing methods, such as fake news, diplomacy, lawfare and foreign electoral intervention. Peach said that the NATO alliance had set up the first NATO counter-hybrid team in Montenegro. “The first NATO counter-hybrid team has been deployed to our ally state, Montenegro, with the aim of helping to strengthen Montenegro’s capacities and deterring hybrid challenges”, Peach said. Several countries, especially Russia, continue their aggressive operations against foreign states, and cyber warfare is becoming the main concern for almost any government. The official explained that since 2014 the defence spending to face hybrid threats has continued to increase, it has been estimated that by 2024 that amount will reach $ 400 billion. “NATO data shows a 4,6% increase in 2019. That is the fifth consecutive year of growth. By the end of this year, allies will have invested over $130 billion”, added Marshal Peach United States Army General Mark Milley, the highest military officer and military adviser to the President, Minister of Defence and U.S. National Security Council, accused the Russian Government of attempting to destabilize the members of the alliance and divide it. “it is evident that Russia has been trying to divide NATO and make it weaker”. General Milley said. “It would be their benefit. It would be detrimental to Europe and the US if NATO just collapsed and disintegrated.” Representatives of Montenegro’s Defence Ministry confirmed that NATO counter-hybrid team visited Montenegro in November. Experts fear that Russia could attempt to influence the forthcoming parliamentary elections that will take place in October 2020. “This visit was the first such engagement in one of the allies, and it was an important experience for Montenegro. Montenegro wants to enhance its capacities and the focus of NATO’s team was on strengthening legislative framework in this domain and its implementation”, said Ivica Ivanović, director general for defence policy. On June 5, 2017 Montenegro officially joined NATO alliance despite the strong opposition from the Russian Government that threatened to retaliate. Cybersecurity experts believe that a new wave of attacks from the cyberspace will hit the state. In February 2017, for the second time in a few months, Montenegro suffered massive and prolonged cyberattacks against government and media websites. Researchers at security firm FireEye who analyzed the attacks observed malware and exploits associated with the notorious Russia-linked APT group known as APT28 (aka Fancy Bear, Pawn Storm, Strontium, Sofacy, Sednit, and Tsar Team). Another massive attack hit the country’s institutions during October 2016 elections, amid speculation that the Russian Government was involved. Hackers targeted Montenegro with spear-phishing attacks, the malicious messages used weaponized documents pertaining to a NATO secretary meeting and a visit by a European army unit to Montenegro. At the time, the cyberspies delivered the GAMEFISH backdoor (aka Sednit, Seduploader, JHUHUGIT, and Sofacy), a malware that was used only by the APT28 group in past attacks.

# AFF ANSWERS

## 2AC

### Perm

#### Perm do both – US pursues unilateral actions while working jointly with NATO on the multilateral level

#### Perm do the CP – just a different way to do the aff

#### These two perms are very generic – you should write perms that are specific to your aff. You could also say “Perm do the CP then the aff, US works unilaterally and then works on the international level”

### Solvency Deficits

#### You should write solvency deficits specific to your own affirmative – tailor it to something that your aff does at the international level

### 2AC---NATO Good – Cyber/AI

#### Alliance wide integration is key to stop Russia and China’s AI and cyber operations

Helen Warrell, 21, (Helen Warrell, 6-7-2021, Financial Times, Nato allies need to speed up AI defence co-operation, https://www.ft.com/content/61c1945c-d153-4d58-b9c5-dffd99a6919e, 6-27-2022) SCade

As Russia intensifies cyber hostilities and China weaponises artificial intelligence, joining forces in the field of high-tech warfare will feature high on the list of topics discussed by Nato allies at a summit next week. But the transatlantic alliance’s 30 members will need to move fast if they aim to make up lost ground. Nato is proposing a new tech innovation centre bringing together military personnel with industry to foster digital defence start-ups. Some of these might be financed by a separate initiative, also set to be debated: a venture capital fund for innovation which member states could choose to opt in to. The efforts are belated, as Nato secretary-general Jens Stoltenberg himself acknowledged. “For decades, Nato allies have been leading when it comes to technology, but that’s not obvious any more,” he told the Financial Times in an interview last week. “We see China especially investing heavily in new, disruptive technologies like artificial intelligence, autonomous systems, big data, and they implement them into new advanced weapon systems, drones, submarines, aircraft and so on.” He is not the first to sound the alarm. Eric Schmidt, the former Google chief executive who now chairs the US’s National Security Commission on AI, warned earlier this year that Beijing was planning to undermine conventional military forces by “leapfrogging” to new technologies. The commission’s report, published in March, raised concerns that China would use AI for “reconnaissance, electromagnetic countermeasures and co-ordinated firepower strikes”. Part of the problem is that western defence institutions have been slow to recognise the potential of innovation beyond their own industry. “For decades, a lot of technological development would happen within the defence sector — the internet, nuclear, GPS, all of that was developed by the defence industry and then shared with the civilian sector,” Stoltenberg said. “Now, it goes the other way around. It’s a civilian sector which is leading in the development of artificial intelligence, quantum computing, and many of the new disruptive technologies.” Some Nato members are ahead of others. The US and France have published military AI strategies, while the UK announced this year that it is to establish a centre for defence AI. For the first time, Britain’s intelligence agency, MI6, is recruiting from the private sector for a new head of its “Q” branch — the technical lab made famous in the James Bond films. Establishing a new Nato hub — known as an “accelerator” — in which tech companies and members of the armed forces can experiment with new ideas has advantages, according to Professor Fiona Murray, co-director of MIT’s innovation initiative. Start-ups and investors do not always have the time to tackle defence challenges when solutions are “hard to test, markets are fragmented and procurement is slow”, Murray said. Working together would create a wider market for new products and enhance collective security, she noted. It was “not enough” for countries to be handling this individually, she said. The US has started marshalling allies on the policy implications of using new technology. The Pentagon’s “AI Partnership for Defense”, comprising 13 countries (including Nato members Canada, Denmark, Estonia, the UK, France and Norway) met virtually for the first time last year to agree joint military standards on AI. Schmidt’s commission has called on the Five Eyes intelligence-sharing alliance (the US, UK, Canada, Australia and New Zealand) to work more closely on developing AI systems. Ulrike Franke, an expert in military technology at the European Council on Foreign Relations, argues that Nato’s tech centre will be most effective if it prioritises systems designed to facilitate joint military operations. The alliance should look at areas such as AI-enabled command and control, she said, which could give members a unified picture of the battlefield across multiple regions, using intelligent data analysis to sift information. Franke said that in the vast arena spanning drones to quantum computing, there was a temptation to cover too much. “It makes massive sense for Nato to look more at this [technology]”, she said. “The question is, what exactly are they focusing on? There’s a danger of Nato spreading itself too thin.”

### 2AC---US-NATO Cyber Good

#### US-NATO can improve cyber awareness, defense, and sharing---leadership is key

Lieutenant Colonel Charles L. Matallana 17, (Lieutenant Colonel Charles L. Matallana 17, United States Army War College Class of 2017. “Maintaining NATO’s Relevance in the 21st Century”. , https://publications.armywarcollege.edu/pubs/3465.pdf, 6-26-2022) SCade

The NATO alliance has taken positive steps in addressing the dilemma faced from cyber-attack. Recently, a December 2016 Joint Declaration signed by the President of the European Council, the President of the European Commission, and the Secretary General of NATO highlights progress towards finding collaborative ways to improve cyber awareness and defense capabilities. The European Union and NATO will exchange concepts on the integration of cyber defense and conduct respective missions and operations to foster interoperability in cyber defense requirements and standards. 54 These declarations will help mature the ability to defend the networks and provide a cohesive response to further attacks. The challenge will be to provide the commitment of resources to realize these goals. The U.S. must continue to take the lead in expanding cooperation within the cyber domain. The advancements made within its own capacity and capability through the development of U.S. Cyber Command have allowed the U.S. to be a lead proponent of cyber defense. As a recent Heritage Foundation study noted, more can be done “through sharing experience, expanding contingency planning, increasing training and exercises.” 55 This is especially urgent with regards to the U.S. and Baltic countries cooperation given the adverse focus Russia puts on these nations as a cyber battleground with NATO.

### 2AC---NATO solves Climate Change

#### NATO cooperation and cohesion solves pandemics, bioD loss and climate change

Sherri Goodman and Katarina Kertysova, 22, (Sherri Goodman, Katarina Kertysova, 2-1-2022, NATO Review, NATO Review, https://www.nato.int/docu/review/articles/2022/02/01/nato-an-unexpected-driver-of-climate-action/index.html, 6-27-2022) SCade

NATO’s climate security agenda

Climate change has long been known as a threat multiplier and is increasingly recognised as a “shaping threat” that dramatically alters the environments in which Allied militaries will have to operate in the coming decades. From higher frequency and intensity of storms, through extreme heat and cold, to reduced supplies of drinking water and faster wear and tear of military equipment, climate change has significant implications for NATO on the tactical, operational and strategic levels. In addition to climate-related risks to military infrastructure and force readiness, more extreme weather events can also increase conflict and migration potential in and beyond NATO’s immediate neighbourhood. Born of the Cold War and designed to defend its members against any external aggression, NATO is evolving to reflect the new security reality of actorless threats, such as pandemics, biodiversity loss and climate change. As a security organisation, NATO cannot be indifferent to these challenges. For NATO to be able to fulfil its core mission of keeping the Euro-Atlantic space safe, building resilience to the impacts of a changing climate and integrating sustainable practices into military planning and capability development is a necessity, not a choice. Evolving consensus The good news is that the Alliance is not starting from scratch. For over 50 years now, NATO has been paying attention to environmental challenges, mostly through a wide range of scientific research activities. NATO has also developed six environmental protection standards (STANAGs) that concern military camps, management of waste, and sustainability of military training areas. Climate change was written into the 2010 Strategic Concept and has been factored into summit declarations since then. In 2014, NATO adopted a Green Defence Framework and integrated energy efficiency and other environmental considerations into the design of the current NATO headquarters, which was completed in 2018. The building blocks for a more ambitious and visible role with respect to climate security are already there. However, NATO as an alliance of 30 countries works by consensus, which is always evolving. As a former UN Special Envoy on Climate Change, Jens Stoltenberg began advocating for NATO to take greater climate-related action many years ago, but his efforts may have been stymied during the previous U.S. administration. The growing number of climate and weather related disasters, which continue to impact lives and livelihoods both within and outside of NATO’s borders, has marked an evident shift in awareness and acceptance of climate change as an issue of national security across the Alliance. In view of increasing societal pressure and the current political momentum, which includes the renewed U.S. leadership on climate change, NATO is now poised to push a more ambitious climate agenda.

### 2AC---US Vaccine Leadership Fails

#### The United States has had a widespread failure in expediting COVID vaccines – CP doesn’t even do enough

* Highlighted parts are how the US has failed, underlined but not highlighted are examples of things the US could do but the CP probably doesn’t do

Editorial Board of NYT, 21, (Editorial Board, The editorial board is a group of opinion journalists whose views are informed by expertise, research, debate and certain longstanding values, 5-14-2021, NYT Opinion, https://www.nytimes.com/2021/05/14/opinion/biden-covid-vaccines-world-india.html, 6-27-2022) SCade

The United States is well on its way to protecting Americans from the coronavirus. It’s time to help the rest of the world. By marshaling this nation’s vast resources to produce and distribute enough vaccines to meet global demand, the United States would act in keeping with the nation’s best traditions and highest aspirations while advancing its geopolitical and economic interests. It is a moment of both obligation and opportunity. Unfortunately, instead of a bold, comprehensive strategy to vaccinate the world as quickly as possible, the Biden administration has thus far made a string of tactical decisions: donating millions of doses to countries in need, signaling its support for patent waivers that might expedite vaccine production efforts and nudging two companies — Merck and Johnson & Johnson — to collaborate on increasing supply. These are good steps, but they are not nearly sufficient to meet the moment. The United States and the rest of the world’s wealthiest nations are facing a great moral challenge. Covax, the World Health Organization’s initiative to pool vaccine resources, remains profoundly underfunded and has failed to meet even its modest target of vaccinating one-fifth of the population in the Global South. Without a major course correction, the rest of the world will have to wait until 2023 or later for large-scale vaccination initiatives like the one underway in the United States. The consequences of this disparity are expected to be severe. Hundreds of thousands more people will get sick and die from a disease that is now preventable with a vaccine. The global economy will contract by trillions of dollars, according to the International Chamber of Commerce, and tens of millions of people will plummet into extreme poverty as the virus continues to fester and evolve in the world’s more vulnerable reaches. As global hunger rises and global life expectancy falls, instability will prevail. Already, Colombia is mired in deadly protests over the pandemic’s economic fallout. India is facing its gravest humanitarian catastrophe in a generation. As the United Nations has warned, a similar crisis in Syria would be catastrophic. President Biden can start by announcing that the United States intends to help and by appointing a vaccine czar to oversee the expansion of vaccine production. The federal government has ample legal power to compel the participation of the pharmaceutical companies, including the sharing of critical information and technologies. Congress has appropriated $16 billion to scale up production, most of which remains unspent. Increasing manufacturing capacity has proved tricky. The global demand for vaccines may be high now, but once the coronavirus pandemic recedes, it will plummet back to normal levels. Increased public ownership, for its part, would ensure that vaccine-production capacity is ready for future pandemics, which are inevitable — potentially including new coronavirus variants for which routine boosters may be required.

### 2AC---NATO Action Key – Montenegro

#### Other NATO states – like Montenegro – require US cyber help – the CP leaves NATO members defenseless

Pierluigi Paganini, 20, (Pierluigi Paganini, Pierluigi Paganini is member of the ENISA (European Union Agency for Network and Information Security) Threat Landscape Stakeholder Group and Cyber G7 Group, he is also a Security Evangelist, Security Analyst and Freelance Writer. Editor-in-Chief at "Cyber Defense Magazine", Pierluigi is a cyber security expert with over 20 years experience in the field, he is Certified Ethical Hacker at EC Council in London. The passion for writing and a strong belief that security is founded on sharing and awareness led Pierluigi to find the security blog "Security Affairs" recently named a Top National Security Resource for US. Pierluigi is a member of the "The Hacker News" team and he is a writer for some major publications in the field such as Cyber War Zone, ICTTF, Infosec Island, Infosec Institute, The Hacker News Magazine and for many other Security magazines. Author of the Books "The Deep Dark Web" and “Digital Virtual Currency and Bitcoin”., 1-20-2020, Security Affairs, Nato has sent an anti-hybrid war team to Montenegro, https://securityaffairs.co/wordpress/96627/cyber-warfare-2/montenegro-nato-hybrid-attacks.html, 6-27-2022) SCade

The Chairman of the NATO Military Committee announced that the alliance has sent a counter-hybrid team to Montenegro to face Russian hybrid attacks. Last week in Brussels, the Chairman of the NATO Military Committee (MC), Marshal Sir Stuart Peach, announced the effort of the Alliance in facing Russian hybrid attacks. The term “Hybrid warfare” refers to a military strategy which employs political warfare and blends conventional warfare, irregular warfare and cyberwarfare with other influencing methods, such as fake news, diplomacy, lawfare and foreign electoral intervention. Peach said that the NATO alliance had set up the first NATO counter-hybrid team in Montenegro. “The first NATO counter-hybrid team has been deployed to our ally state, Montenegro, with the aim of helping to strengthen Montenegro’s capacities and deterring hybrid challenges”, Peach said. Several countries, especially Russia, continue their aggressive operations against foreign states, and cyber warfare is becoming the main concern for almost any government. The official explained that since 2014 the defence spending to face hybrid threats has continued to increase, it has been estimated that by 2024 that amount will reach $ 400 billion. “NATO data shows a 4,6% increase in 2019. That is the fifth consecutive year of growth. By the end of this year, allies will have invested over $130 billion”, added Marshal Peach United States Army General Mark Milley, the highest military officer and military adviser to the President, Minister of Defence and U.S. National Security Council, accused the Russian Government of attempting to destabilize the members of the alliance and divide it. “it is evident that Russia has been trying to divide NATO and make it weaker”. General Milley said. “It would be their benefit. It would be detrimental to Europe and the US if NATO just collapsed and disintegrated.” Representatives of Montenegro’s Defence Ministry confirmed that NATO counter-hybrid team visited Montenegro in November. Experts fear that Russia could attempt to influence the forthcoming parliamentary elections that will take place in October 2020. “This visit was the first such engagement in one of the allies, and it was an important experience for Montenegro. Montenegro wants to enhance its capacities and the focus of NATO’s team was on strengthening legislative framework in this domain and its implementation”, said Ivica Ivanović, director general for defence policy. On June 5, 2017 Montenegro officially joined NATO alliance despite the strong opposition from the Russian Government that threatened to retaliate. Cybersecurity experts believe that a new wave of attacks from the cyberspace will hit the state. In February 2017, for the second time in a few months, Montenegro suffered massive and prolonged cyberattacks against government and media websites. Researchers at security firm FireEye who analyzed the attacks observed malware and exploits associated with the notorious Russia-linked APT group known as APT28 (aka Fancy Bear, Pawn Storm, Strontium, Sofacy, Sednit, and Tsar Team). Another massive attack hit the country’s institutions during October 2016 elections, amid speculation that the Russian Government was involved. Hackers targeted Montenegro with spear-phishing attacks, the malicious messages used weaponized documents pertaining to a NATO secretary meeting and a visit by a European army unit to Montenegro. At the time, the cyberspies delivered the GAMEFISH backdoor (aka Sednit, Seduploader, JHUHUGIT, and Sofacy), a malware that was used only by the APT28 group in past attacks.

### 2AC---US Failing at AI

#### The US is no longer demolishing China in the race – need full NATO cooperation to outpace China

Graham Allison and Eric Schmidt, 20, (Graham Allison Eric Schmidt, 8-1-2020, Belfer Center for Science and International Affairs, Is China Beating the U.S. to AI Supremacy?, https://www.belfercenter.org/publication/china-beating-us-ai-supremacy, 6-27-2022) SCade

The US-China Race for Artificial Intelligence Combining decades of experience advancing frontier technologies, on the one hand, and analyzing national security decisionmaking, on the other, we have been collaborating over the past year in an effort to understand the national security implications of China’s great leap forward in artificial intelligence (AI). Our purpose in this essay is to sound an alarm over China’s rapid progress and the current prospect of it overtaking the United States in applying AI in the decade ahead; to explain why AI is for the autocracy led by the Chinese Communist Party (hereafter, the “Party”) an existential priority; to identify key unanswered questions about the dangers of an unconstrained AI arms race between the two digital superpowers; and to point to the reasons why we believe that this is a race the United States can and must win. We begin with four key points. First, most Americans believe that U.S. leadership in advanced technologies is so entrenched that it is unassailable. Likewise, many in the American national security community insist that in the AI arena China can never be more than a “near-peer competitor.” Both are wrong. In fact, China stands today as a full-spectrum peer competitor of the United States in commercial and national security applications of AI. Beijing is not just trying to master AI—it is succeeding. Because AI will have as transformative an impact on commerce and national security over the next two decades as semiconductors, computers and the web have had over the past quarter century, this should be recognized as a matter of grave national concern.1,2,3 Second, China’s zeal to master AI goes far beyond its recognition that this suite of technologies promises to be the biggest driver of economic advances in the next quarter century. For the Party, AI is mission critical. The command of 1.4 billion citizens by a Party-controlled authoritarian government is a herculean challenge. Since the fall of the Soviet Union, Americans have been confident that authoritarian governments are doomed to fail—eventually. But AI offers a realistic possibility of upending this proposition. AI could give the Party not just an escape hatch from the “end of history,”4 but a claim to advance a model of governance—a national operating system—superior to today’s dysfunctional democracies. As one former Democratic presidential candidate put it: “China is using technology to perfect dictatorship.”5 It’s a value proposition that resonates with many leaders around the world. As former Google ceo Eric Schmidt has argued: “if the Soviet Union had been able to leverage the kind of sophisticated data observation, collection and analytics employed by the leaders of Amazon today, it might well have won the Cold War.” Third, while we share the general enthusiasm about AI’s potential to make huge improvements in human wellbeing, the development of machines with intelligence vastly superior to humans will pose special, perhaps even unique risks. In 1946, Albert Einstein warned, “the unleashed power of the atom has changed everything save our modes of thinking, and thus we drift towards unparalleled catastrophe.” We believe the same could be said of AI. Henry Kissinger has identified these risks in what we call “Kissinger’s Specter.” In his words, AI threatens an unpredictable revolution in our consciousness and our thinking, and an “inevitable evolution in our understanding of truth and reality.”6 In response to Einstein’s insight, the technologists and strategists who had built and used the bomb to end World War II joined forces to find ways to prevent a nuclear World War III. Meeting the challenges posed by AI will require nothing less. Fourth, China’s advantages in size, data collection and national determination have allowed it over the past decade to close the gap with American leaders of this industry. It is currently on a trajectory to overtake the United States in the decade ahead. Nonetheless, if the United States will awake to the challenge and mobilize a national effort, we believe that it can develop and execute a winning strategy.

### A2: NATO fails at AI

#### NATO initiatives prove they are successful at AI management

Colin Demarest, 22, (Colin Demarest, Colin Demarest is a reporter at C4ISRNET, where he covers military networks, cyber and IT. Colin previously covered the Department of Energy and its NNSA — namely Cold War cleanup and nuclear weapons development — for a daily newspaper in South Carolina. Colin is also an award-winning photographer!, 5-18-2022, Defense News, NATO launches AI initiative to ensure tech advantage, https://www.defensenews.com/artificial-intelligence/2022/05/18/nato-launches-ai-initiative-to-ensure-tech-advantage/, 6-24-2022) SCade

WASHINGTON — Two NATO agencies recently kicked off an artificial intelligence initiative to better understand the technology and its potential warfare applications. More than 80 AI experts, researchers and academics from the U.S. and other member countries are involved with the venture, known as a strategic “horizon scanning,” put together by the NATO Science and Technology Organization and the NATO Communications and Information Agency. An inaugural meeting and workshop was held this month in The Hague, Netherlands, where the NCI Agency’s data science and AI facilities are located. “AI is one of the key emerging and disruptive technologies identified by NATO as vital for the maintenance of its technological edge,” NATO Chief Scientist Bryan Wells said in a statement. “By working together, the STO and the NCI Agency are able to bring together global experts to ensure the very best scientific expertise is available to advise NATO and its allies and partners on the latest scientific trends in this area.” The NATO guarantee of a collective defense and the advantage of numbers, both on the battlefield and in the lab, has been much discussed amid Russia’s latest invasion of Ukraine and the subsequent membership applications made by Finland and Sweden. NATO ministers in October adopted the alliance’s first-ever AI strategy, which describes the capability as “changing the global defense and security environment” and offering “an unprecedented opportunity to strengthen our technological edge but will also escalate the speed of the threats we face.” The strategy emphasizes responsible use of AI for defense across six tenets: lawfulness; responsibility and accountability; explainability and traceability; reliability; governability; and bias mitigation. AI frameworks and other guidance drafted by the U.S. and its defense community take a similar approach. NATO allies in 2019 agreed to focus on seven emerging and disruptive technologies, data, computing and AI among them. Making sure there are shared standards, and that systems will work with systems, will be critical to success, officials said. “One of the big challenges when we go into this new phase of disruptive technologies is how do you keep all allies on the same hymn sheet when it comes down to communicating with each other, using the same technology, being interoperable,” David van Weel, NATO assistant secretary general for emerging security challenges, told Defense News in March 2021. “So that’s a big part [of the strategy] and a big role for NATO to play.”

#### Standardization and new rules solves for any of NATO shortcomings – gets NATO back to innovating

Ben Wodecki, 22, (Ben Wodecki, 5-4-2022, AI Business, NATO at risk of losing AI innovation race to Russia, China, https://aibusiness.com/document.asp?doc\_id=777260, 6-24-2022) SCade

The North Atlantic Treaty Organization (NATO) should standardize and regulate AI to keep up with rivals, according to findings published by the U.S. think tank, Center for European Policy Analysis (CEPA). CEPA’s comments came as it published a series of AI-related recommendations for NATO amid growing geopolitical tensions with the likes of Russia, China and North Korea. Its recommendations include AI standardization, encouraging and improving AI literacy and spurring private sector innovation. Such undertakings would allow NATO allies to better scale and deploy AI – and keep pace with rivals. “These new capabilities will revolutionize NATO’s military and strategic affairs, thus strengthening NATO’s ability to fulfill its essential core tasks of collective defense, crisis management and cooperative security,” CEPA’s Nicholas Nelson and Nico Luzum wrote. The pair cited AI projects being undertaken by adversaries, including China’s attempts to develop purported mind-controllable drones and AI assistants for fighter pilots. But NATO allies have their own capabilities – including U.S.-developed autonomous tanks and British-made systems that provide ground troops with information on the surrounding terrain. The think tank’s study suggests that at present, NATO is leading the AI race – but risks losing its competitive advantage to peer competitors “competitors if allies fail to leverage the private sector, coordinate implementation and engage with the public.” CEPA suggests that NATO allies should accelerate AI adoption and actively encourage private sector innovation. “Ultimately, we hope that these recommendations enable NATO allies to better innovate, scale, deploy, and integrate AI and autonomy-based technologies to form agile, system-wide solutions.

### A2: AI Timeframe too slow

* Make sure this does not conflict with parts of the aff

#### Russia autonomous weapons are hype – too many technical difficulties

Gregory C. Allen, 22, (Gregory C. Allen, Gregory C. Allen is the director of the Artificial Intelligence (AI) Governance Project and a senior fellow in the Strategic Technologies Program at the Center for Strategic and International Studies in Washington, D.C. Director, AI Governance Project and Senior Fellow, Strategic Technologies Program, 5-26-2022, No Publication, Russia Probably Has Not Used AI-Enabled Weapons in Ukraine, but That Could Change, https://www.csis.org/analysis/russia-probably-has-not-used-ai-enabled-weapons-ukraine-could-change, 6-27-2022) SCade

In March, WIRED ran a story with the headline “Russia's Killer Drone in Ukraine Raises Fears About AI in Warfare,” with the subtitle, “The maker of the lethal drone claims that it can identify targets using artificial intelligence.” The story focused on the KUB-BLA, a small kamikaze drone aircraft that smashes itself into enemy targets and detonates an onboard explosive. The KUB-BLA is made by ZALA Aero, a subsidiary of the Russian weapons manufacturer Kalashnikov (best known as the maker of the AK-47), which itself is partly owned by Rostec, a part of Russia’s government-owned defense-industrial complex. The WIRED story understandably attracted a lot of attention, but those who only read the sensational headline missed the article’s critical caveat: “It is unclear if the drone may have been operated in this [an AI-enabled autonomous] way in Ukraine.” Other outlets re-reported the WIRED story, but irresponsibly did so without the caveat. WIRED’s assessment that Kalashnikov claims the KUB-BLA “boasts the ability to identify targets using artificial intelligence” is based on two main pieces of evidence: a Kalashnikov press release about ZALA Aero’s “Artificial Intelligence Visual Identification (AIVI)” capabilities for its unmanned aircraft, and the original Kalashnikov press release announcing the KUB-BLA in 2019. However, these two pieces of evidence are less than they seem. The Russian-language AIVI press release never mentions the KUB-BLA or military applications. Instead, it describes a ZALA Aero machine-learning AI drone product line that is marketed to industrial and agricultural sectors. Incorporating modern machine-learning AI into military applications is significantly more difficult than in industrial or agricultural applications. Modern machine-learning AI using deep neural networks offers the opportunity for incredible gains in performance, but that performance depends on having lots of training data during development. Moreover, that training data needs to closely resemble operational conditions. In general, it is much easier to get such training data from commercial customers than from an enemy military, especially if friendly weapons systems and sensors do not often come within range of enemy ones. The most mature military AI applications are ones like satellite reconnaissance: even in peacetime, satellites get to take a lot of pictures of Russian and Chinese military forces, and those pictures can be digitally labeled by human experts to turn them into training data. Training data is what machine learning AI systems learn from. The combination of a learning algorithm and training data is how AI systems learn to recognize what is in the image. But training data is generally application-specific. Satellite image recognition training data only helps build satellite image recognition AI. One cannot magically use labeled satellite image data to train an AI for a robotic drone’s targeting computer (at least not with today’s technology). Getting enough of the right sort of training data to incorporate modern AI into, say, a robotic tank’s targeting computer, is a much tougher technical challenge. It is not impossible in principle, but in practice, there are far fewer opportunities to collect the right sort of training data.

#### Too many issues to create unilateral AI – multilateral offers numerous benefits

* Shared training data sets
* Increased R&D
* Increased experts to train AI
* More ways to test AI

Paul Maxwell, 20, (Paul Maxwell, Lt. Col (Ret) Paul Maxwell is the Cyber Fellow of Computer Engineering at the Army Cyber Institute at the United States Military Academy. He was a cyber and armor branch officer during his twenty-four years of service. He holds a PhD in electrical engineering from Colorado State University., 4-20-2020, Modern War Institute, Artificial Intelligence is the Future of Warfare (Just Not in the Way You Think), https://mwi.usma.edu/artificial-intelligence-future-warfare-just-not-way-think/, 6-27-2022) SCade

AI’s Shortfalls for Military Applications As the military looks to incorporate AI’s success in these tasks into its systems, some challenges must be acknowledged. The first is that developers need access to data. Many AI systems are trained using data that has been labeled by some expert system (e.g., labeling scenes that include an air defense battery), usually a human. Large datasets are often labeled by companies who employ manual methods. Obtaining this data and sharing it is a challenge, especially for an organization that prefers to classify data and restrict access to it. An example military dataset may be one with images produced by thermal-imaging systems and labeled by experts to describe the weapon systems found in the image, if any. Without sharing this with preprocessors and developers, an AI that uses that set effectively cannot be created. AI systems are also vulnerable to becoming very large (and thus slow), and consequently susceptible to “dimensionality issues.” For example, training a system to recognize images of every possible weapon system in existence would involve thousands of categories. Such systems will require an enormous amount of computing power and lots of dedicated time on those resources. And because we are training a model, the best model requires an infinite amount of these images to be completely accurate. That is something we cannot achieve. Furthermore, as we train these AI systems, we often attempt to force them to follow “human” rules such as the rules of grammar. However, humans often ignore these rules, which makes developing successful AI systems for things like sentiment analysis and speech recognition challenging. Finally, AI systems can work well in uncontested, controlled domains. However, research is demonstrating that under adversarial conditions, AI systems can easily be fooled, resulting in errors. Certainly, many DoD AI applications will operate in contested spaces, like the cyber domain, and thus, we should be wary of their results. Ignoring the enemy’s efforts to defeat the AI systems that we may employ, there are limitations to these seemingly super-human models. An AI’s image-processing capability is not very robust when given images that are different from its training set—for example, images where lighting conditions are poor, that are at an obtuse angle, or that are partially obscured. Unless these types of images were in the training set, the model may struggle (or fail) to accurately identify the content. Chat bots that might aid our information-operations missions are limited to hundreds of words and thus cannot completely replace a human who can write pages at a time. Prediction systems, such as IBM’s Watson weather-prediction tool, struggle with dimensionality issues and the availability of input data due to the complexity of the systems they are trying to model. Research may solve some of these problems but few of them will be solved as quickly as predicted or desired. Another simple weakness with AI systems is their inability to multi-task. A human is capable of identifying an enemy vehicle, deciding a weapon system to employ against it, predicting its path, and then engaging the target. This fairly simple set of tasks is currently impossible for an AI system to accomplish. At best, a combination of AIs could be constructed where individual tasks are given to separate models. That type of solution, even if feasible, would entail a huge cost in sensing and computing power not to mention the training and testing of the system. Many AI systems are not even capable of transferring their learning within the same domain. For example, a system trained to identify a T-90 tank would most likely be unable to identify a Chinese Type 99 tank, despite the fact that they are both tanks and both tasks are image recognition. Many researchers are working to enable systems to transfer their learning, but such systems are years away from production. Artificial-intelligence systems are also very poor at understanding inputs and context within the inputs. AI recognition systems don’t understand what the image is, they simply learn textures and gradients of the image’s pixels. Given scenes with those same gradients, AIs readily identify portions of the picture incorrectly. This lack of understanding can result in misclassifications that humans would not make, such as identifying a boat on a lake as a BMP.

### A2: LAWS Norms

#### Only a multilateral framework can create positive norms on LAWS

Jay Ettinger, 20, (Jay Ettinger, Jay is JD & Legal Intern, UN High Commissioner for Human Rights, Fall 2020, “Overcoming International Inertia: The Creation of War Manual for Lethal Autonomous Weapons Systems,” Minnesota Journal Of International Law, https://minnjil.org/wp-content/uploads/2021/09/Ettinger-MACRO.pdf, 6-27-2022) SCade

\*IHL = International Humanitarian Law

B. Challenges Facing the Existing Approach to Building a Legal Framework for LAWS Development and Use. With many nations aggressively pursuing LAWS technology, there is an urgent need to develop standards to influence and regulate the testing and deployment of this new technology.162 The current UN-focused approach is not progressing quickly enough to provide meaningful guidance to States.163 As stated by one observer, “the pace of diplomacy [is] falling behind the speed of technological advancement.”164 Historically, the development of IHL has been heavily dependent on state practice and consequently takes a significant amount of time for custom to ripen.165 Additionally, given the high stakes of creating a body of law that grants the use of deadly force in the name of national security, the codification of state practice into multilateral treaties is a highly sensitive and contested process.166 The process is also highly pluralistic, which while valuable for accounting for diverse interests, can make progress challenging.167 As described by Michael Schmitt, “[c]onfronted with a cacophony of inputs—private and public, military and civilian, domestic and international—the IHL lawyer frequently finds clarity and consensus elusive.”168

### NATO solves Climate

#### NATO cooperation and cohesion solves pandemics, bioD loss and climate change

Sherri Goodman and Katarina Kertysova, 22, (Sherri Goodman, Katarina Kertysova, 2-1-2022, NATO Review, NATO Review, https://www.nato.int/docu/review/articles/2022/02/01/nato-an-unexpected-driver-of-climate-action/index.html, 6-27-2022) SCade

NATO’s climate security agenda

Climate change has long been known as a threat multiplier and is increasingly recognised as a “shaping threat” that dramatically alters the environments in which Allied militaries will have to operate in the coming decades. From higher frequency and intensity of storms, through extreme heat and cold, to reduced supplies of drinking water and faster wear and tear of military equipment, climate change has significant implications for NATO on the tactical, operational and strategic levels. In addition to climate-related risks to military infrastructure and force readiness, more extreme weather events can also increase conflict and migration potential in and beyond NATO’s immediate neighbourhood. Born of the Cold War and designed to defend its members against any external aggression, NATO is evolving to reflect the new security reality of actorless threats, such as pandemics, biodiversity loss and climate change. As a security organisation, NATO cannot be indifferent to these challenges. For NATO to be able to fulfil its core mission of keeping the Euro-Atlantic space safe, building resilience to the impacts of a changing climate and integrating sustainable practices into military planning and capability development is a necessity, not a choice. Evolving consensus The good news is that the Alliance is not starting from scratch. For over 50 years now, NATO has been paying attention to environmental challenges, mostly through a wide range of scientific research activities. NATO has also developed six environmental protection standards (STANAGs) that concern military camps, management of waste, and sustainability of military training areas. Climate change was written into the 2010 Strategic Concept and has been factored into summit declarations since then. In 2014, NATO adopted a Green Defence Framework and integrated energy efficiency and other environmental considerations into the design of the current NATO headquarters, which was completed in 2018. The building blocks for a more ambitious and visible role with respect to climate security are already there. However, NATO as an alliance of 30 countries works by consensus, which is always evolving. As a former UN Special Envoy on Climate Change, Jens Stoltenberg began advocating for NATO to take greater climate-related action many years ago, but his efforts may have been stymied during the previous U.S. administration. The growing number of climate and weather related disasters, which continue to impact lives and livelihoods both within and outside of NATO’s borders, has marked an evident shift in awareness and acceptance of climate change as an issue of national security across the Alliance. In view of increasing societal pressure and the current political momentum, which includes the renewed U.S. leadership on climate change, NATO is now poised to push a more ambitious climate agenda.