# \*\*\*\*\*AI Interoperability Affirmative\*\*\*\*\*

## AI Interoperability 1AC

### 1AC – AI Leadership

#### Advantage 1: AI Leadership

#### China is winning the AI race now with the United States—this will give them the edge in global supremacy.

RUQAYYA ANWER, 1/18/2022 (Academic at Riphah International University, Pakistan, Ph.D. holder of media and communication studies, “China is winning the power battle in AI race with US,” <https://www.dailysabah.com/opinion/op-ed/china-is-winning-the-power-battle-in-ai-race-with-us>, Retrieved 6/15/2022)

There is a widespread belief that China is establishing itself as a new superpower, displacing the United States from the global power structure. China has undeniably become a worldwide economic powerhouse, and it is anticipated to overtake the U.S. as the world's largest economy by 2028. With increased spending on weapons research and the development of multiple covert weapons, China is on the verge of surpassing the U.S. in military capability. Significantly, countries that lead in the research and application of artificial intelligence (AI) will determine the future of the technology and increase their economic competitiveness greatly, while those that fall behind risk losing competitiveness in critical industries. AI is set to revolutionize the world, empowering those countries that fully realize its promise. It will be a key driver of future economic growth and national security. Moreover, AI is sometimes referred to as a general-purpose technology because of its wide range of applications in practically every industry – the GUID Partition Table (GPT). A GPT is a technology with widespread economic implications. Only a few examples exist such as steam engines, electricity and computers. These technologies have had a profound impact on our civilizations by modifying preexisting economic and social systems. AI is the newest brilliant, dazzling object on the technological horizon. It has grown very popular in today's globe. It's the simulation of human intellect in computers that have been programmed to learn and mimic human behavior. AI will have a significant impact on our quality of life as it develops. It has the potential to significantly boost the economy of a developed country. For its technological advancements, China has won the AI battle with the U.S. and is on its way to world supremacy. According to Western intelligence assessments, China, the world's second-largest economy, is expected to dominate many major emerging technologies, including AI, synthetic biology and genetics, within a decade or two. Pentagon official’s words The Pentagon's first chief software officer, Nicolas Chaillan stressed that “in 15 to 20 years, we have no competing fighting chance against China.” It's already decided; “Whether it requires a war or not is kind of anecdotal right now.” He also claimed that several government departments in the U.S. had "kindergarten-level" cyber defenses. Moreover, Chaillan also criticized the reluctance of U.S. firms, such as Google, to collaborate with the government on AI, and extensive ethical disputes over technology for the U.S.’ delayed innovation. While China was destined to rule the world's future, everything from media narratives to geopolitics is under their control. One of the reasons China has been able to move more rapidly than the U.S. is that it is not mired in enormous arguments about AI ethics. But partly because Chinese businesses are compelled to collaborate with the government, whereas many American businesses are wary of working with the Pentagon. Google, for instance, halted working with the Pentagon on AI in 2018 after a dozen employees departed after the business assisted the Department of Defense in developing software that could boost drone attack accuracy. Chaillan, on the other hand, stated that Chinese corporations were obligated to comply with the Chinese government and were making "huge expenditures" in AI without concern for ethical considerations. Notably, the U.S. has attempted to curb China's emergence as a digital power by prohibiting Huawei's 5G network from operating in the U.S. and establishing a virtual embargo on U.S. companies supplying software and components to Chinese tech firms. Whereas China’s President Xi Jinping is pushing China to establish technological self-sufficiency in fields such as microchip manufacturing to wean the country off its reliance on the U.S. Significantly, there will always be economic ups and downs, but the underlying drive that's occurring in Chinese culture right now will continue to create new prospects and growth. China has announced a five-year plan worth $1.8 trillion to dominate AI, robotics, 6G and all other technologies by 2035, releasing a five-year plan worth $1.8 trillion. In comparison to the European Union and the U.S., China's AI capabilities have advanced in several areas. China has surpassed the bloc as the world's largest AI publisher. Moreover, the quality of its AI research has consistently improved over time. Its software and computer services companies have increased their R&D expenditures. China's determination to master AI goes far beyond the recognition that this group of technologies will be the most crucial driver of economic advancement over the next quarter-century. China's data collection and national determination have helped it to close the gap with American leaders in this area over the last decade. China now has nearly twice as many supercomputers ranked in the top 500 for performance as the U.S., even though the U.S. was once the leader in this category. Furthermore, China is likely to maintain its advantage in terms of data generation. Overall, though, China has not dramatically narrowed the AI gap with the U.S., but its steady growth could eventually erode U.S. dominance over the technology. Consequently, countries that lead in the research and application use of AI will determine the future of the technology and increase their economic competitiveness greatly, while those that fall behind risk losing competitiveness in critical industries. As a result, China has taken the lead. The Chinese government, rules and regulations, public attitudes toward privacy and strong collaboration between corporations and the government are all contributing to the country's AI progress. At the same time, American AI confronts significant challenges, including a culture that prioritizes privacy over security, distrusts authority and the government; as such, firms are wary of collaborating with the U.S.

#### US leadership in AI technology is key to protect the liberal international order.

DEPARTMENT OF DEFENSE, 2/12/2019 (“SUMMARY OF THE 2018 DEPARTMENT OF DEFENSE ARTIFICIAL INTELLIGENCE STRATEGY,” Retrieved 6/12/2022 from <https://media.defense.gov/2019/Feb/12/2002088963/-1/-1/1/SUMMARY-OF-DOD-AI-STRATEGY.PDF>.)

Other nations, particularly China and Russia, are making significant investments in AI for military purposes, including in applications that raise questions regarding international norms and human rights. These investments threaten to erode our technological and operational advantages and destabilize the free and open international order. The United States, together with its allies and partners, must adopt AI to maintain its strategic position, prevail on future battlefields, and safeguard this order. We will also seek to develop and use AI technologies in ways that advance security, peace, and stability in the long run. We will lead in the responsible use and development of AI by articulating our vision and guiding principles for using AI in a lawful and ethical manner. The costs of not implementing this strategy are clear. Failure to adopt AI will result in legacy systems irrelevant to the defense of our people, eroding cohesion among allies and partners, reduced access to markets that will contribute to a decline in our prosperity and standard of living, and growing challenges to societies that have been built upon individual freedoms.

#### Chinese power undermines the liberal world order and leads to multiple scenarios for nuclear conflict:

Thomas H. Henriksen, 3/23/2017 (Senior Fellow at Hoover Institution, Stanford University, USA, “Post-American World Order,” <https://www.hoover.org/research/post-american-world-order>, Retrieved 8/11/2021)

China’s Not So Peaceful Rise A series of dramatic events took place in response to Obama’s growing disengagement policies, as world powers noted Washington’s burgeoning inwardness. China switched from its “peaceful rise” policy to aggressively asserting and expanding its international presence. Xi Jinping, the all-powerful Chinese leader, moved to advance Beijing’s political and military suzerainty over the South China Sea (SCS) by seizing and reconstructing the disputed shoals into artificial islands with dredged ocean sands in 2014. Next, China militarized three micro-isles of the Spratly Islands (also claimed by the Philippines, Malaysia, and Vietnam) with runways, radars, and surface-to-air missile sites—actions that broke Beijing’s earlier promise not to militarize the waterway. Since then, Chinese officials have made it clear that the SCS is now their exclusive lake. Other states are expected to recognize China’s claims to most of the energy-rich waters, through which $5 trillion of trade passes annually, roughly half the world’s merchant fleet tonnage. China backs its assertions by modernizing the arsenals of its advanced warships, aircraft, missiles, and ground forces. Xi and company seem bent on restoring the ancient tribute system in which South Korea and Vietnam would become modern-day vassals, while more distant Asian states become supplicants in a Sinocentric sphere. In short, China has become a revisionist juggernaut. Along with its fortifying of these artificial islands, the world’s second largest economy and military spender has emerged as an economic, political, and ideological competitor of the United States not only in Southeast Asian maritime zones but globally. China is maneuvering to set up bases or harbors in Pakistan, Sri Lanka, and Greece—and is even extending its reach to the long U.S.-allied Portuguese Azores in the mid-Atlantic. In reaction to Beijing’s SCS actions, the Trump administration has stepped up America’s own show of force by sending warships, fighter jets, and submarines to the waters. To underline its not-too-subtle counter-signal to China, the United States also test-fired four Trident II submarine-launched ballistic missiles over 4,000 miles into the Pacific Ocean from the California coast last month, the first four-missile salvo in the post-Soviet era. The western Pacific is becoming a tinderbox. Russia’s Resurgence At the other end of the Asian continent, Russia longs to restore its lost prestige and political influence, forfeited with the breakup of the Soviet Union in 1991. Under Vladimir Putin, Russian forces backed the seizure of Crimea from Ukraine before taking over its eastern borderlands. Earlier, Moscow perfected its “frozen war” tactics against two provinces in the Republic of Georgia, thereby yanking them from Georgian sovereignty. Russia’s bullying and intimidation of its Baltic and Eastern European neighbors have become commonplace. Meanwhile, the Russian foreign minister, Sergei Lavrov, called for “a post-West world” at the Munich Security Conference in mid-February. What China and Russia have in common is that both are engaged in advancing their spheres of influence in their neighborhoods and beyond. Both also seek to crack the Western liberal world order. The United States, meanwhile, has become blasé about its former leadership position in the Western hemisphere, where China’s companies have entered into business deals, some with strategic implications. Washington, without a hint of nostalgia, treats the Monroe Doctrine as a relic of yesteryear’s Yankee imperialism in Latin America. These newly assertive major powers are not alone in shattering the post-Cold War order, which witnessed the unrivaled predominance of the United States—the “indispensable nation,” in the words of the Clinton administration. Trouble-making regional powers, such as Iran, Syria, and North Korea either spread terrorism, provoke instability, or arm themselves with longer-range missiles and nuclear weapons. While they were independent actors a few years ago, each of these pariah regimes increasingly aligns with the two chief U.S. adversaries. Iran and Syria cozy up to Russia, and North Korea depends for fuel and food on a China that hypocritically protests that it lacks influence over a nuclear-armed Pyongyang. Western Europe, once a powerful but independently minded U.S. ally, has faltered. Its slippage is evident in the refugee crisis, its sagging economies, its 20 percent youth unemployment rate, and its reluctance to fund an adequate military defense in the face of Russia’s continuing provocations, including cyber-attacks, disinformation campaigns, and fake news stories. Europe’s paltry defense reflects the continent’s lost belief in its own purpose—and even, some might say, its own civilization. Sino-Russian Partnering Little of this threatening world existed when the United States enjoyed its unipolar moment after the eclipse of its Soviet nemesis, and even after the 9/11 terrorist attacks. The emergent world, divided between the United States, China, and Russia, points to the new global order. Particularly worrisome are the warming relations between Beijing and Moscow, despite Chinese designs on Siberian lands and resources. Overcoming a centuries-old rivalry, the recent Sino-Russian rapprochement compounds Washington’s difficulties. Separating Russia from China, as Kissinger and Nixon did, would be a sensible goal for President Trump. It has always been a wise recourse to divide one’s adversaries. Besides, the United States and Russia have worked together in the past. During the World War II, they collaborated against the Third Reich. And during the Cold War, they cooperated in nuclear arms treaties and wheat deals, while mutually trying to skirt a flashpoint that could end in a nuclear war. Washington can work to steer the Kremlin, as it has done before, toward acceptable conduct with its neighbors before Russia can be more than a tactical ally in the great game with China. In the immediate future, the United States can adopt international and domestic approaches to cope with Russian and Chinese territorial expansionism. The tensions stoked by the assertive regimes in the Kremlin or Tiananmen Square could spark a political or military incident that might set off a chain reaction leading to a large-scale war. Historically, powerful rivalries nearly always lead to at least skirmishes, if not a full-blown war. The anomalous Cold War era spared the United States and Soviet Russia a direct conflict, largely from concerns that one would trigger a nuclear exchange destroying both states and much of the world. Such a repetition might reoccur in the unfolding three-cornered geopolitical world. It seems safe to acknowledge that an ascendant China and a resurgent Russia will persist in their geo-strategic ambitions. What Is To Be Done? The first marching order is to dodge any kind of perpetual war of the sort that George Orwell outlined in “1984,” which engulfed the three super states of Eastasia, Eurasia, and Oceania, and made possible the totalitarian Big Brother regime. A long-running Cold War-type confrontation would almost certainly take another form than the one that ran from 1945 until the downfall of the Soviet Union. What prescriptions can be offered in the face of the escalating competition among the three global powers? First, by staying militarily and economically strong, the United States will have the resources to deter its peers’ hawkish behavior that might otherwise trigger a major conflict. Judging by the history of the Cold War, the coming strategic chess match with Russia and China will prove tense and demanding—since all the countries boast nuclear arms and long-range ballistic missiles. Next, the United States should widen and sustain willing coalitions of partners, something at which America excels, and at which China and Russia fail conspicuously. There can be little room for error in fraught crises among nuclear-weaponized and hostile powers. Short- and long-term standoffs are likely, as they were during the Cold War. Thus, the playbook, in part, involves a waiting game in which each power looks to its rivals to suffer grievous internal problems which could entail a collapse, as happened to the Soviet Union. Some Chinese and Russian experts predict grave domestic problems for each other. They also entertain similar thoughts about the United States, which they view as terminally decadent and catastrophically polarized over politics, ethnicity, and the future direction of the country. So, the brewing three-way struggle also involves a systemic contest, which will test the competitors’ economic and political institutions. At this juncture, the world is entering a standoff among the three great and several not-so-great powers. Averting war, while defending our interests, will prove a challenge, calling for deft policy, political endurance, and economic growth, as well as sufficient military force to keep at bay aggressive states or prevail over them if ever a war breaks out.

#### Lack of US leadership on emerging technologies risks great power nuclear conflict.

Matthew Kroenig, 2021 (Professor in the Department of Government and the Edmund A. Walsh School of Foreign Service at Georgetown University, “Will Emerging Technology Cause Nuclear War?: Bringing Geopolitics Back In,” <https://www.airuniversity.af.edu/Portals/10/SSQ/documents/Volume-15_Issue-4/D-Kroenig.pdf>, Retrieved 6/15/2022)

In order to fully understand the link between nuclear stability and emerging technology, the current geopolitical situation must be accounted for. Incorpo-rating emerging technologies into US, Ally, and partner militaries will likely reinforce the prevailing global strategic stability. Will emerging technology cause nuclear war? For more than 70 years, the world has avoided major- power conflict, and many attribute this era of peace to nuclear weapons.1 In situations of mutually assured destruction, neither side has an incentive to launch a nuclear first strike because doing so will only result in self- annihilation. Maintaining secure, second- strike capabilities—the ability to absorb an enemy nuclear attack and respond with a devastating counterattack—is the key to deterrence.2 Recently, analysts have begun to worry, however, that new military technologies may call into question this model of global strategic stability.3 The world is experiencing a fourth industrial revolution (4IR) in which a wave of new and transformative technologies is being developed, includ¬ing artificial intelligence (AI), additive manufacturing, quantum informa¬tion technology, hypersonic missiles, biotechnology, and directed energy.4 While these technologies are expected to have profound implications for societies and economies, most are dual use and will also affect national security, including nuclear strategic stability. According to an emerging conventional wisdom, new technology may upset nuclear strategic stability by calling into question the survivability of nuclear forces.5 The solution, according to some analysts, is for nuclear- armed states to eschew military applications of at least some of these tech¬nologies and lead an international effort to control their spread.6 But these studies too often consider new technology and nuclear strategy in the abstract without adequately considering the prevailing geopolitical con¬text into which these new technologies have been introduced. This article argues understanding the link between new technology and nuclear stability must consider the prevailing geopolitical context. For the past several decades, the United States, its Allies, and like- minded part-ners have formed the core of the existing international order.7 They have benefited from this system and would like to see it strengthened, revital-ized, and defended. If the new technologies of the 4IR are incorporated into US, Ally, and partner militaries, then any advantages they provide will likely reinforce the prevailing distribution of power and existing sources of strategic stability. In contrast, China and Russia are revisionist powers intent on disrupt-ing or displacing the US- led system, and they would likely employ new technological advantages to pursue revisionist aims. The greatest danger from emerging technology for nuclear stability, therefore, may result from the possibility that new technology provides Russia or China an enhanced military advantage over vulnerable US Allies and partners, leading to a regional conflict with a significant risk of nuclear escalation.

#### Chinese tech leadership risks war over Taiwan or the East and South China Seas—these scenarios risk nuclear escalation.

Matthew Kroenig, 2021 (Professor in the Department of Government and the Edmund A. Walsh School of Foreign Service at Georgetown University, “Will Emerging Technology Cause Nuclear War?: Bringing Geopolitics Back In,” <https://www.airuniversity.af.edu/Portals/10/SSQ/documents/Volume-15_Issue-4/D-Kroenig.pdf>, Retrieved 6/15/2022)

Similarly, Moscow and Beijing would likely use any newfound military strength to advance their preexisting geopolitical aims. Given their very different positions in the international system, however, these states are likely to employ new military technologies in ways that are destabilizing. These states have made clear their dissatisfaction with the existing inter¬national system and their desire to revise it. Both countries have ongoing border disputes with multiple neighboring countries. If Moscow developed new military technologies and operational con-cepts that shifted the balance of power in its favor, it would likely use this advantage to pursue revisionist aims. If Moscow acquired a newfound ability to more easily invade and occupy territory in Eastern Europe, for example (or if Putin believed Russia had such a capability), it is more likely Russia would be tempted to engage in aggression. Likewise, if China acquired an enhanced ability through new technology to invade and occupy Taiwan or contested islands in the East or South China Seas, Beijing’s leaders might also find this opportunity tempting. If new technology enhances either power’s anti- access, area- denial network, then its leaders may be more confident in their ability to achieve a fait accompli attack against a neighbor and then block a US- led liberation. These are precisely the types of shifts in the balance of power that can lead to war. As mentioned previously, the predominant scholarly theory on the causes of war—the bargaining model—maintains that imperfect in¬formation on the balance of power and the balance of resolve and credible commitment problems result in international conflict.52 New technology can exacerbate these causal mechanisms by increasing uncertainty about, or causing rapid shifts in, the balance of power. Indeed as noted above, new military technology and the development of new operational con¬cepts have shifted the balance of power and resulted in military conflict throughout history. Some may argue emerging military technology is more likely to result in a new tech arms race than in conflict. This is possible. But Moscow and Beijing may come to believe (correctly or not) that new technology pro¬vides them a usable military advantage over the United States and its Al¬lies and partners. In so doing, they may underestimate Washington. If Moscow or Beijing attacked a vulnerable US Ally or partner in their near abroad, therefore, there would be a risk of major war with the potential for nuclear escalation. The United States has formal treaty commitments with several frontline states as well as an ambiguous defense obligation to Taiwan. If Russia or China were to attack these states, it is likely, or at least possible, that the United States would come to the defense of the victims. While many question the wisdom or credibility of America’s global com¬mitments, it would be difficult for the United States to simply back down. Abandoning a treaty ally could cause fears that America’s global commit¬ments would unravel. Any US president, therefore, would feel great pres¬sure to come to an Ally’s defense and expel Russian or Chinese forces. Once the United States and Russia or China are at war, there would be a risk of nuclear escalation. As noted previously, experts assess the greatest risk of nuclear war today does not come from a bolt- out- of- the- blue strike but from nuclear escalation in a regional, conventional conflict.53 Russian leaders may believe it is in their interest to use nuclear weapons early in a conflict with the United States and NATO.54 Russia possesses a large and diverse arsenal, including thousands of nonstrategic nuclear weapons, to support this nuclear strategy. In the 2018 Nuclear Posture Review, Washington indicates it could re-taliate against any Russian nuclear “de- escalation” strikes with limited nuclear strikes of its own using low- yield nuclear weapons.55 The purpose of US strategy is to deter Russian strikes. If deterrence fails, however, there is a clear pathway to nuclear war between the United States and Russia. As Henry Kissinger pointed out decades ago, there is no guarantee that, once begun, a limited nuclear war stays limited.56 There are similar risks of nuclear escalation in the event of a US- China conflict. China has traditionally possessed a relaxed nuclear posture with a small “lean and effective” deterrent and a formal “no first use” policy. But China is relying more on its strategic forces. It is projected to double—if not triple or quadruple—the size of its nuclear arsenal in the coming decade.57 Chinese experts have acknowledged there is a narrow range of contin-gencies in which China might use nuclear weapons first.58 As in the case of Russia, the US Nuclear Posture Review recognizes the possibility of limited Chinese nuclear attacks and also holds out the potential of a lim-ited US reprisal with low- yield nuclear weapons as a deterrent.59 If the nuclear threshold is breached in a conflict between the United States and China, the risk of nuclear exchange is real. In short, if a coming revolution in military affairs provides a real or perceived battlefield advantage for Russia or China, such a development raises the likelihood of armed aggression against US regional allies, major power war, and an increased risk of nuclear escalation.

#### Threats to US hegemony lead to nuclear war:

Lu Yuanzhi, 2/4/2021 (journalist, Global Times, “Washington’s reckless attitude toward nuclear war a threat to world peace,” [https://www.globaltimes.cn/page/ 202102/1215044.shtml](https://www.globaltimes.cn/page/%20202102/1215044.shtml), Retrieved 8/11/2021)

Fox News reported that the head of US Strategic Command Charles Richard is calling on the US military and federal leaders to reimagine methods of deterring aggressive action from rivals such as China and Russia. He wrote in the February issue of Proceedings, the US Naval Institute's monthly magazine, that, "There is a real possibility that a regional crisis with Russia or China could escalate quickly to a conflict involving nuclear weapons." It's not uncommon to hear the noise preaching so-called threats of China and Russia. Yet it's still shocking to see a US senior military official publicly urging leaders of his country to consider a nuclear war. His narratives have drawn wide attention. Song Zhongping, a Chinese military expert and commentator, told the Global Times on Thursday that Richard's rhetoric may be out of the following intention. First, he may hope to increase the strategic value of the Strategic Command in the US military. Second, Richard wants the US Congress to allocate more funds to create a new US nuclear weapons system, in a bid to reinforce a new triad of strategic nuclear forces. Third, he seeks to pursue the Strategic Command's larger control over US nuclear weapons. For whatever reason, a top military official from the US, the most powerful country and whose new administration has pledged to restore its global leadership, is irresponsible to express such a crazy idea, as it poses huge challenges to world peace and security. It should be condemned by the international community. Most nuclear-weapon countries including China, tend to keep their nuclear force for the purpose of safeguarding their national security. Only when their safety, sovereignty or territory is threatened, will they consider resorting to using nuclear weapons. But the principle of the US totally differs. The US military might be the strongest, possessing the largest and most advanced nuclear arsenal. In spite of vowing to pursue disarmament, Washington actually spent trillions of dollars in upgrading its nuclear arsenal. Apart from terrorists, no country is capable of posing any threat to the US homeland. Just as Song said, spending trillions of dollars to upgrade its nuclear arsenal is mainly to maintain its global hegemony. This is the fundamental difference between the US and other nuclear-weapon countries in terms of keeping nuclear forces. Washington covers a wide range when it comes to defending its hegemony. It includes safeguarding its national security as well as its core interests on a global scale. Just as former US president Barack Obama said at the US Military Academy at West Point in 2014, "America must always lead on the world stage… If we [the US] don't, no one else will." If any country gravely threatens US hegemony, the possibility cannot be ruled out that the US may use nuclear weapons to remarkably impair its rivals' military capability. This is the huge threat of US radical nuclear policy posed to the world. It is a big challenge for all countries, including China and Russia, and to global peace and safety. The US is the biggest trouble-maker in the world, which has the potential to overturn global peace.

#### War with China can happen by miscalculation:

Michèle A. Flournoy, 6/18/2020 (Co-Founder and Managing Partner of WestExec Advisors. From 2009 to 2012, she served as U.S. Undersecretary of Defense for Policy, “How to Prevent a War in Asia,” https://www.foreignaffairs.com /articles/united-states/2020-06-18/how-prevent-war-asia, Retrieved 8/11/2021)

Amid all the uncertainty about the world that will follow the pandemic, one thing is almost sure to be true: tensions between the United States and China will be even sharper than they were before the coronavirus outbreak. The resurgence of U.S.-Chinese competition poses a host of challenges for policymakers—related to trade and economics, technology, global influence, and more—but none is more consequential than reducing the risk of war. Unfortunately, thanks to today’s uniquely dangerous mix of growing Chinese assertiveness and military strength and eroding U.S. deterrence, that risk is higher than it has been for decades, and it is growing. Neither Washington nor Beijing seeks a military conflict with the other. Chinese President Xi Jinping and U.S. President Donald Trump both undoubtedly understand that a war would be disastrous. Yet the United States and China could all too easily stumble into conflict, sparked by a Chinese miscalculation of the United States’ willingness or capability to respond to provocations in disputed areas such as the South China Sea or to outright aggression against Taiwan or another U.S. security partner in the region.

#### Their turns are false--US leadership on advanced technologies will increase deterrence and not threaten aggression.

Matthew Kroenig, 2021 (Professor in the Department of Government and the Edmund A. Walsh School of Foreign Service at Georgetown University, “Will Emerging Technology Cause Nuclear War?: Bringing Geopolitics Back In,” <https://www.airuniversity.af.edu/Portals/10/SSQ/documents/Volume-15_Issue-4/D-Kroenig.pdf>, Retrieved 6/15/2022)

The spread of new technology to the United States and its Allies and partners would likely serve, on balance, to reinforce the existing sources of stability in the prevailing international system. At the end of the Cold War, the United States and its Allies and partners achieved a technological- military advantage over its great power rivals, with the US using its unipolar position to deepen and expand a rules- based system. They also employed their military dominance to counter perceived threats from rogue states and terrorist networks. The United States, its Allies, and part¬ners did not, however, engage in military aggression against great power, nuclear- armed rivals or their allies. In the future, these status quo powers are apt to use military advantages to reinforce their position in the international system and to deter attacks against Allies and partners in Europe and the Indo- Pacific. These states might also employ military power to deal with threats posed by terrorist networks or by regional revisionist powers such as Iran and North Korea. But it is extremely difficult to imagine scenarios in which Washington or its Allies or partners would use newfound military advantages provided by emerging technology to conduct an armed attack against Russia or China.

#### Common standards in NATO are essential to maintaining an AI edge over China—both the domestic counterplan and the EU counterplan will fail to solve the AFF.

MELISSA HEIKKILÄ, 3/29/2021 (Senior reporter for AI @techreview, “NATO wants to set AI standards. If only its members agreed on the basics,” <https://www.politico.eu/article/nato-ai-artificial-intelligence-standards-priorities/>, Retrieved 6/15/2022)

The Western military alliance has identified artificial intelligence as a key technology needed to maintain an edge over adversaries, and it wants to lead the way in establishing common ground rules for its use. “We need each other more than ever. No country alone or no continent alone can compete in this era of great power competition,” NATO Deputy Secretary-General Mircea Geoană, the alliance’s second in command, said in an interview with POLITICO. The standard-setting effort comes as China is pressing ahead with AI applications in the military largely free of democratic oversight. David van Weel, NATO’s assistant secretary general for emerging security challenges, said Beijing's lack of concern with the tech's ethical implications has sped along the integration of AI into the military apparatus. "I'm ... not sure that they're having the same debates on principles of responsible use or they're definitely not applying our democratic values to these technologies,” he said. Meanwhile, the EU — which has pledged to roll out the world's first binding rules on AI in coming weeks — is seeking closer collaboration with Washington to oversee emerging technologies, including artificial intelligence. But those efforts have been slow in getting off the ground. For Geoană, that collaboration will happen at NATO, which is working closely with the European Union as it prepares AI regulation focusing on “high risk” applications. The pitch NATO does not regulate, but “once NATO sets a standard, it becomes in terms of defensive security the gold standard in that respective field,” Geoană said. The alliance's own AI strategy, to be released before the summer, will identify ways to operate AI systems responsibly, identify military applications for the technology, and provide a “platform for allies to test their AI to see whether it's up to NATO standards,” van Weel said. The strategy will also set ethical guidelines around how to govern AI systems, for example by ensuring systems can be shut down by a human at all times, and to maintain accountability by ensuring a human is responsible for the actions of AI systems. “If an adversary would use autonomous AI powered systems in a way that is not compatible with our values and morals, it would still have defense implications because we would need to defend and deter against those systems,” van Weel said. “We need to be aware of that and we need to flag legislators when we feel that our restrictions are coming into the realm of [being detrimental to] our defense and deterrence,” he continued.

### 1AC – Conflict Resolution

#### Advantage 2: Conflict Resolution

#### NATO coordination on AI is necessary to prevent accidents and allow de-escalation in conflict.

Zoe Stanley-Lockman, 2022 (Defense and Strategic Studies, Nanyang Technological University, “NATO’s Role in Responsible AI Governance in Military Affairs,” [https://www.oxfordhandbooks.com/view/ 10.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69](https://www.oxfordhandbooks.com/view/%2010.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69), Retrieved 6/11/2022)

Even without being attacked, governability of AI in a NATO context also means understanding how AI-enabled and autonomous systems developed by the 30 Allies—and other partners—will interact with one another. NATO has expressed interest in governability as a principle of AI “to disengage or deactivate in case of unintended behavior,”85 which echoes the U.S. Department of Defense definition of governable AI.86 Disengaging adversaries is important to maintain de-escalation measures in conflict. For NATO, interoperability between systems also relates to governable AI because allies must also consider how the interactions between the 30 Allies’ own AI-enabled and autonomous systems may result in unintended or emergent behavior.87 This means that NATO has a responsibility to coordinate activities—be they technical exchanges, standardization efforts, or training and exercises—to build confidence that the systems perform as humans intend.88 Without this coordination, the lack of interoperability of allied systems could lead to accidents, and separately, the potential loss of operational effectiveness also presents vulnerabilities for adversaries to exploit.

#### Advances in AI bolster international arms control.

Jessica Cox, 2021 (Director of Nuclear Policy at NATO, “The Unavoidable Technology: How Artificial Intelligence Can Strengthen Nuclear Stability,” WASHINGTON QUARTERLY)

These and other applications will contribute to national technical means (NTM) of verification. Non-interference in NTM for arms control verification protocols is a well-established tool of most major arms control treaties and is also used unilaterally by states to observe others’ activities and behaviors. With advances in AI, states may invest more heavily in NTM, which will have positive implications for future arms control agreements. First, it could give an advantage to countries with more sophisticated AI and NTM capabilities. The United States, for example, would have an advantage over Russia in this area, which might make Russia more interested in traditional verification activities in future arms control agreements.41 Second, states will have to go to greater lengths to hide any cheating activities. And finally, it might reduce the need for on-site inspections, which could make participation in arms control agree¬ments with “closed” societies like China, North Korea, and Russia more attrac¬tive than relying primarily on the current “boots on the ground” procedures. That said, even with enhanced AI monitoring, there remain important benefits of “boots on the ground” inspectors, which have proven to be particularly valu¬able both to observe compliance and build trust between parties to an arms control agreement. But monitoring particularly sensitive facilities with AI-enhanced NTM, like nuclear warhead storage sites, might be especially useful when nations have traditionally been reluctant to allow on-site inspections.42

#### Revitalizing international arms control stops multiple scenarios for nuclear conflict.

Michael Krepon, 11/8/2021 (co-founder of the Stimson Center, “HOW TO AVOID NUCLEAR WAR,” <https://warontherocks.com/2021/11/how-to-avoid-nuclear-war/>, Retrieved 6/15/2022)

Arms control has become passé. Russian and U.S. leaders have cast aside treaties as inconvenient to their pursuit of freedom of action. Republican presidents produced great arms control achievements. At present, most Republican senators and aspirants for higher office denigrate arms control and treaty-making as a failed, unnecessary, and unwise pursuit. Arms control provided necessary guardrails in the past. Now, dangerous military practices are on the rise, especially in Ukraine and across the Taiwan Strait. U.S.-Chinese relations are trending toward crisis. Four nuclear-armed states in Asia — China, Pakistan, India, and North Korea — are increasing their nuclear arsenals. Every nuclear-armed competitor is relying increasingly on deterrence as the diplomacy of arms control is in the doldrums. If unaltered, these trend lines point toward tragedy. Many have forgotten what is crucial to remember: Deterrence is dangerous by design and has a track record of failure in lesser cases. There have already been two border wars between nuclear-armed rivals — the Soviet Union and China in 1969 and India and Pakistan in 1999. India and China as well as India and Pakistan clash along disputed borders. As rivals sharpen deterrence, they move toward the next crisis. Deterrence has always needed diplomacy and arms control to avoid nuclear tragedy. Deterrence resulted in five-digit-sized U.S. and Soviet nuclear arsenals. Diplomacy reduced superpower holdings by 85 percent. The dictates of deterrence led to almost 2,000 nuclear tests, including over 400 in the atmosphere. Diplomacy produced treaties limiting and then prohibiting nuclear testing. Deterrence generated dangerous military practices like maintaining nuclear weapon delivery vehicles on a high state of alert. Diplomacy produced guardrails, codes of conduct, and rules of the road. When the Soviet Union dissolved, deterrence didn’t provide safeguards against “loose nukes” and “dirty” bombs. The diplomacy of arms control did. Diplomacy also produced treaties curbing nuclear proliferation as well as prohibiting chemical and biological weapons. No hard problem is ever solved in perpetuity by either diplomacy or deterrence. Outliers and norm breakers still exist. Without norms, however, there are no norm breakers. The diplomacy of arms control has kept their number small. Deterrence didn’t establish protective norms. The diplomacy of arms control did. National leaders will again seek arms control in its varied forms for the same reasons as their predecessors. They will reach the conclusion that strengthening measures for deterrence increase nuclear dangers, and that diplomacy is required to reduce them. It might take a major crisis — or something worse — for U.S., Chinese, and Russian leaders to turn to diplomacy the way that John F. Kennedy and Nikita Khrushchev did after the Cuban missile crisis. The remarkable journey Ronald Reagan undertook with Mikhail Gorbachev began with Reagan’s realization after the annus horribilis of 1983 — a year of multiple shocks to U.S.-Soviet relations — that a paranoid Kremlin leadership believed that Armageddon was approaching. Eventually — and sooner is far better than later — nuclear-armed rivals will arrive at the same conclusions that Kennedy, Khrushchev, Reagan, Gorbachev, and other leaders before them: Nuclear war has to be avoided, and deterrence by itself is, at best, half the solution. Deterrence needs help that only diplomacy and arms control can provide. A new construction project for nuclear arms control will borrow from the past, but it will take different shape than during the Cold War because the geometry of nuclear competition is far more complicated. The measures of reassurance leaders choose to pursue alongside deterrence will be adapted to suit domestic political purposes and geopolitical realities. Whenever chastened or forward-looking leaders of nuclear-armed states turn to arms control, they will not have to start from scratch. Revival is possible because foundational elements for avoiding nuclear war remain in place. Deterrence is well funded and national vulnerability between nuclear-armed rivals remains inescapable. Key norms continue to constrain the options of deterrence strategists and national leaders. The norm of no battlefield use of nuclear weapons is now over seven decades old. The last tests of nuclear weapon designs of any military consequence by a pairing of nuclear-armed rivals occurred over two decades ago. Since every test of a nuclear weapon constitutes a declaration of military utility, the absence of testing matters greatly. These norms can be broken tomorrow or next year. But these two key norms have survived many days and many years. Because they are the hardest for any national leader to break, their extension is feasible. Leaders who wish to avoid nuclear war can build on these foundational elements. A third critical norm, that of nonproliferation, is codified in a treaty that was indefinitely extended in 1995. This norm requires reinforcement because additional pairings of nuclear-armed rivals would multiply chances of catastrophe. Iran poses a serious challenge to this norm. Reaffirmation can be pursued either through diplomacy or, if diplomacy is vitiated, through military strikes. The follow-on proliferation consequences of Iran acquiring nuclear weapons are so great that this stark choice is unavoidable. Those who denigrate arms control forget that, by the end of the Cold War, conditions for lasting nuclear peace were in hand — not because of strengthened deterrence, but because champions of deterrence adopted the practices of arms control. The United States and Russia were no longer enemies. Crucial norms were in place alongside the Anti-Ballistic Missile Treaty, which codified national vulnerability, thereby removing one incentive for increased nuclear force levels. Strategic forces were no longer threatening: Indeed, Boris Yeltsin agreed in the second Strategic Arms Reduction Treaty to the prohibition of land-based missiles carrying multiple warheads. Conditions for strategic, crisis, and arms race stability were therefore at hand. Deep cuts were envisioned. Dangerous military practices were absent. Major powers respected the territorial integrity and national sovereignty of others. This was the inheritance that Vladimir Putin, George W. Bush, and Donald Trump found unnecessary and inconvenient. Putin initiated the demise of arms control by disregarding provisions of the Conventional Forces in Europe Treaty. Bush withdrew from the Anti-Ballistic Missile Treaty, prompting, as forewarned, Putin’s withdrawal from the second Strategic Arms Reduction Treaty and its prohibition of land-based missiles carrying multiple warheads. As NATO expanded, Putin became more blatant in violating treaties, most notably the Intermediate-Range Nuclear Forces Treaty. Bush announced plans to deploy missile defenses in new NATO countries and to include Georgia and Ukraine in the queue for future NATO membership. Then Putin’s army marched on Tbilisi, after which he carried out hybrid warfare in eastern Ukraine and annexed Crimea. Putin then shed crocodile tears when Trump withdrew from the Intermediate-Range Nuclear Forces and Open Skies treaties. Where do we go from here? During the Cold War, strategic arms control was built on treaties, and treaties were built on numbers. Treaties and numbers still matter greatly, but they are much harder to negotiate in a triangular, as opposed to a bilateral, context. Because of the complex geometry of nuclear competition and because of domestic politics in the United States, less formal constraints seem unavoidable. More states will have seats at the table, most importantly China. All this will take time. In the meantime, norms matter more than formalities. Norms are easier to extend than new strategic arms reduction treaties are to negotiate, and nuclear numbers are to reduce. A hard focus on extending and reaffirming crucial norms can, over time, establish conditions for far fewer numbers, with or without treaties. If Beijing and Moscow choose to engage in dangerous military practices, arms control, whether by means of norm strengthening or numbers, will not succeed. In this event, the United States will also increasingly engage in dangerous military practices. The dynamics of this competition will invite crises, or worse. Perhaps then, the competitors will become more inclined toward measures of reassurance alongside deterrence. In my book, Winning and Losing the Nuclear Peace: The Rise, Demise, and Revival of Arms Control, I propose that we embrace an ambitious goal of extending the three norms of no use, no testing, and no new proliferation to the 100th anniversary of Hiroshima and Nagasaki. Imagine, if you can, a world in which nuclear weapons have not been used on battlefields for 100 years, and a world in which nuclear weapons have not been tested by major and regional powers for almost five decades. Imagine, too, that North Korea remains the last nuclear-armed state. Now imagine the perceived utility of nuclear weapons in 2045. How many potential mushroom clouds would be required for deterrence? How high would the barriers be against use and testing? Aiming for a century of non-battlefield use, a half-century of not testing nuclear weapons, and another quarter-century of successful nonproliferation might seem too ambitious and even otherworldly. Perhaps, but in 1945 it seemed otherworldly to envision a world in which nuclear weapons would not be used in warfare for three-quarters of a century. When conversations began about limiting nuclear testing in the Eisenhower administration, it was similarly otherworldly to envision a world in which major and regional powers would not conduct tests for a quarter-century. Those who conceived of a global nonproliferation compact more than a half-century ago were rewarded with 62 signatories. Notably absent were China, France, West Germany, other U.S. allies, Brazil, Argentina, and leading non-aligned states. This treaty now has 189 adherents, one dropout, North Korea, and one severe test — Iran. The hardest part of establishing these three bedrock norms is behind us. Further extensions are possible, even in a period of heightened competition, because they are the most difficult norms for national leaders to break. The national leader who authorizes the first use a nuclear weapon since 1945 will live in infamy for the rest of recorded history. The companion norm of no testing signifies recognition of the dangers associated with use. Experiments continue, and those who complain about troubling experiments block on-site inspections by opposing ratification of the Comprehensive Nuclear-Test-Ban Treaty. Chinese officials have repeatedly said that they will not ratify the test ban treaty until the U.S. Senate consents to do so. India won’t ratify until China does, and Pakistan will wait for India to ratify. Republican senators most concerned by China’s nuclear build up can do something about it: They can consent to the Comprehensive Nuclear-Test-Ban Treaty while demanding that all four instruments of ratification be deposited together. A cascade of ratifications could begin with a super-majority vote in the U.S. Senate. Meanwhile, test moratoria continue because the major power willing to resume testing would set off a very different cascade, as all four nuclear-armed rivalries would follow suit. The greatest nuclear dangers reside in the increase in dangerous military practices between the United States and China, Russia and the United States, India and China, and Pakistan and India. Air and naval operations in the Taiwan Strait and South China Sea increase the likelihood of crises, as do military operations in eastern Ukraine. But we’ve been here before, not just with the Soviet Union, but also with China. Despite severe crises and because of diplomacy, the norm of no battlefield use has held, at least so far. Norm strengthening is a matter of daily occurrence. Success happens one day at a time and one crisis at a time. What, then, to do about treaties and numbers? President Joe Biden and Putin quickly agreed to extend verifiable limits in the 2010 Strategic Arms Reductions Treaty for another five years. Negotiating next steps will be challenging. U.S. and Russian negotiators are discussing many agenda items, with some preferences clearly beyond reach. The greatest threats to nuclear peace at present relate to ground, air, and naval forces operating in close proximity, as well as dangerous cyber and space practices. Consequently, Washington’s most challenging and urgent agenda items relate to codes of conduct rather than numerical arms control. This agenda belongs at the top of Washington’s conversations with Beijing as well as Moscow. Another U.S.-Russian treaty mandating further reductions becomes harder to envision as China ramps up its force structure. Trump was right in calling for Beijing’s inclusion and an end to its free riding, but he proposed a trilateral warhead counting exercise rather than effective controls and reductions. Whatever appeal this proposal has in conceptual or visionary terms — or some downsized variant of this idea, such as counting tactical nuclear weapons — it would constitute a very lengthy digression from reducing nuclear dangers. Norm strengthening is needed well before counting is completed and reductions can begin. Where can this most usefully be done? The 65-member Conference on Disarmament in Geneva is too unwieldy to succeed. Its last hurrahs in treaty making occurred during the Clinton administration. Ever since, its procedures have empowered blocking action. There is also scant reason to expect that the permanent five members of the U.N. Security Council can become an effective forum to advance important arms control agenda items. The geometry of nuclear competition suggests creation of a new forum to focus on norm building and codes of conduct in which all four pairs of nuclear-armed rivals are represented along with Britain and France, countries with great expertise and practical experience to offer. I would exclude Israel and North Korea from this forum because their addition poses more problems than potential benefits. A seven-nation forum consisting of the United States, Russia, China, India, Pakistan, Britain, and France would be hard to steer, but the nuclear dangers we now face are interconnected and unwieldy. When the nature of a problem seems intractably complex, the wisest course might just be to expand the scope of the problem. Even as the four pairs compete, they have the most to lose if key norms are broken and the most to gain if they are extended. Existing bilateral conversations on nuclear risk reduction would, of course, continue, but there are no effective channels of communication and substantive exchanges between India and China and between India and Pakistan, where border clashes are becoming more intense. A non-hierarchical, seven-nation approach to norm building might just succeed. All seven have significant concerns about the intentions and capabilities of states with the most dynamic nuclear modernization programs. Each state has its own reasons to engage, as well as to be wary. If other states are willing to sit at the table, it becomes harder for anyone to hold out. The ground rules for seven-nation talks seem most likely to avoid traps if the agreed focus of conversation is nuclear risk reduction and norm building. Sidebar conversations would be encouraged, as they could lay the groundwork for bilateral agreements. The tabling of bilateral issues would, however, be prohibited. The first order of business might be to affirm the canonical Reagan-Gorbachev pledge that a nuclear war cannot be won and must not be fought. Thematic discussions on dangerous military practices might suggest common concerns and remedies, whether bilateral or multilateral. Again, this sounds wildly optimistic. The intensification of rivalries could well foreclose useful discussions — even if all seven states agree to attend. There are many pitfalls, requiring deft multilateral diplomacy. The U.S. State Department would need reinforcements. And yet, for all the manifold difficulties involved, there is sufficient connective tissue to try. Potential benefits include new opportunities to engage China and to open clogged channels of conversation. Over time, if this forum proves its worth, topics could evolve from norm building to the consideration of guardrails, limits, and reductions for nuclear modernization programs. None of the states with the most dynamic modernization programs are willing to relax requirements unless others do. One approach worth considering is a multilateral build-down concept where all seven states would agree to reduce the size of their arsenals as they modernize them. A build-down approach has the advantage of becoming all encompassing, while avoiding a ratio-based, hierarchical, multilateral system that has been tried before for naval arms control and that has no practical chance of success. Lengthening and strengthening norms have to be the first order of business when dangerous military practices are on the rise. Numerically based arms control cannot take an extended holiday, however, especially since Russia is adding new means of delivery to its strategic forces and Beijing is acting with dispatch to significantly increase its deployments of land-based missiles. As if the agenda outlined here isn’t ambitious enough, a new negotiating forum to address trilateral nuclear arms control and reductions seems inescapable. The more China builds up, the harder it becomes to succeed at bilateral controls. There are, no doubt, mixed motives behind the speed of Beijing’s build up, which is reminiscent of the Kremlin’s actions in preparations for strategic arms limitation talks in the Johnson and Nixon administrations. Some deterrence strategists will view Beijing’s activities as early evidence of nuclear war-winning ambitions. Other explanations seem more likely, including the prosaic impulses of seeking to gain leverage in upcoming negotiations and to avoid disadvantage. Beijing surely recognizes that it cannot “just say no” to strategic arms limitations indefinitely. Because Beijing is in a hurry, the Biden administration is obliged to speed up preparations for trilateral negotiations on numerical limitations that serve U.S. national security interests as well as the interests of friends and allies. As with the U.S.-Soviet strategic arms limitation talks, trilateral discussions are likely to encounter stalls and unexpected delays. We have time to do our homework on important matters of scope and limitation. When the Johnson administration was first preparing for negotiations with the Kremlin, its plans included limitations on medium-range, intermediate-range, as well as ocean-spanning missiles. This approach is worth reconsidering, given Putin’s deployment of these missiles in violation of the Intermediate-Range Nuclear Forces Treaty, U.S. rejoinders, and China’s heavy investments in missiles of less-than-intercontinental-range. Then there is the highly contentious matter of including interceptors for national missile defenses. Depending on what means of delivery are included and excluded, it might be possible to devise an effective arms control regime with equal aggregates of nuclear-capable delivery vehicles and missile defense interceptors. A firestorm of protests to equal aggregates with China as well as Russia can be expected, but depending on units of account, counting rules, and range limits, they might well serve the interests of the United States as well as U.S. friends and allies. Dozens of loopholes would need to be nailed shut, and Beijing would have to accept uncomfortable monitoring arrangements. Success will be very hard to achieve and will likely be followed by setbacks until leaders arrive on the scene who are willing to buck deterrence orthodoxy. When they do, the build-down concept of reducing while modernizing might also apply. If and when norm-strengthening negotiations evolve into numerical accords, the fluidity of trilateral relations and opposition on Capitol Hill will preclude treaty making. If trilateral accords can somehow be reached, they would likely take the form of executive agreements and be term limited. The arguments in favor of formality and agreements of indefinite duration are not persuasive when treaties, like executive agreements, can be discarded after U.S. national elections. The reaffirmation of norms need not await the resolution of discussions about numbers. To the contrary: The reaffirmation of norms is needed if trilateral talks are to succeed over time. Even if agreements are not reachable or as inclusive as we would like, preliminary discussions with Moscow and Beijing could still have utility. At a minimum, it could prod useful assessments of different limitation parameters and on how best to proceed. Those who didn’t recognize winning the nuclear peace will surely notice its loss. Strengthening deterrence provides no guarantee against catastrophic loss. To avoid nuclear war, diplomacy and arms control have to accompany deterrence. Sooner or later, national leaders will revive arms control because our lives depend on it. Reassurance and stabilization begin with lengthening and strengthening norms and can take many forms. Reinvention depends on diplomatic adeptness, creativity, and wisdom. It also depends on the state of relations between major powers. If their competition sharpens, and if national leaders are content to intensify that competition, then no proposals to reverse course will succeed. When leaders decide to pursue course corrections or when leaders change, opportunities will arise. When conditions permit, they’ll need plans on how best to proceed. We face daunting challenges because policymakers have run out of simple solutions. We have much ground to cover since the era of grand treaty making ended with the Cold War. It’s time to plan once again for a future in which nuclear weapons aren’t used in warfare. We’ve succeeded in the past, and we can succeed again by harnessing deterrence with arms control.

#### Integrating AI into nuclear weapons systems helps avoid the risks of nuclear escalation.

Jessica Cox, 2021 (Director of Nuclear Policy at NATO, “The Unavoidable Technology: How Artificial Intelligence Can Strengthen Nuclear Stability,” WASHINGTON QUARTERLY)

Traditionally, nuclear deterrence relies on a country having credible nuclear capabilities plus the political will or resolve to use them if necessary (and only if necessary), therefore persuading an adversary to not attack. Integrating AI into nuclear systems can enhance nuclear decision-making, improving percep¬tions of both capability and resolve. Early Warning and Detection: Avoiding Unnecessary Use and Escalation Most significantly, integrating AI into intelligence, surveillance, and reconnais¬sance (ISR) systems and using AI as part of the analytical tool kit for early warning and detection could improve target identification, prevent false positives or close calls, and increase understanding of adversary actions. AI can be used to increase a nation’s ability to understand the nature of its environment as well as speed of analysis and development of courses of action in a conflict, thus improv¬ing its overall capabilities in the nuclear space and reducing the risk of unin¬tended escalation in the midst of a crisis with a nuclear dimension. In a nuclear exchange, national leadership may have just minutes to assess a situation and determine whether to launch its own nuclear response. Nuclear weapons states such as the United States have sought to increase this decision-making time to reduce the potential for misunderstanding or miscal- culation in a crisis, given the immense consequences of using nuclear weapons.21 Incorporating AI into early warning and decision-making analysis may improve both the speed and quality of information processing as well as eliminate potential biases from military leadership, which will be crucial in a crisis to allow time for de-escalation and tension reduction between sides. AI can similarly enhance the ability to discriminate between real and false information, which is critical to preventing miscalculation or mistake in a crisis. A number of “close calls” have occurred throughout the years, in which nuclear weapons use was only avoided through human intervention based on uncertain information.22 In 1983, NATO undertook Command Post Exercise Able Archer to “practice command and staff procedures, with particular emphasis on the transition from conventional to non-conventional operations, including the use of nuclear weapons.”23 At the time, Soviet paranoia about a US nuclear first strike, with preparations under cover of a war game, was at an all-time high. When NATO began its Able Archer exercise, Soviet officials thought the exercise was real and put mobile intercontinental ballistic missiles (ICBMs) on a three-minute alert.24 The same year, the Soviet early warning com¬puter system signaled five incoming US Minuteman ICBMs. The watch officer on duty, Soviet Lt. Col. Stanislav Petrov, did not report the incident, concluding that it must be a false alarm. If he had reported that US nuclear missiles were inbound, the Soviets would have followed their nuclear doctrine and retaliated with no time to double-check or negotiate with the United States.25 Petrov ulti¬mately made the right call—as the Soviet early warning system had mistaken sun shining off clouds for incoming missiles. Even after the end of the Cold War, in 1995, a Norwegian civilian research rocket launch was detected by the radar crews from the Russian Missile Attack Warning System (MAWS) and mistaken for a US Trident II submarine-launched ballistic missile. Command and control procedures were enacted, including notification of President Boris Yeltsin and activation of the Russian “cheget” system—essentially its nuclear football. Russian authorities eventually determined that this was not a nuclear-armed ballistic missile launch after reviewing satellite and other intelligence information.26 While these and other incidents were ultimately resolved successfully through the intervention of military experts and political leaders,27 they illustrate the dangers of imperfect systems that rely on human analysts with potentially inac¬curate or inadequate information. As defense researcher Jaganath Sankaran argues, “future applications of AI to nuclear command and control should aspire to create an algorithm that could argue in the face of overwhelming fear of an impending attack that a nuclear launch isn’t happening.”28 Such an approach could both reduce the fog of war and reassure decision-makers that their course of action is correct in the face of uncertain information, either using nuclear weapons or refraining from it. Although most nuclear-armed nations now use multiple systems to reduce the chances of a false positive warning signal, advancements in AI could significantly improve confidence in and functionality of these systems when integrated with human decision-making. AI tools could play a significant role in helping to ident¬ify patterns of life and reduce potential operator biases in conducting analysis. For instance, in order to be able to quickly discriminate between a country’s launch of a sounding/research rocket as opposed to an ICBM, which have very similar radar signatures, big data analytical tools could be used to collate and process massive amounts of electronic data—including signals, imagery, and open source collec¬tion—over time to identify patterns of behavior unique to each type of launch. Then, if there is an ambiguous or unexpected launch, these systems would be able to quickly determine whether or not the current circumstances more closely resemble one type of launch over the other—actually preventing future close calls or misinterpretations of data, as occurred in Able Archer in 1983. A human analyst would likely still need to make a final determination, but through the use of AI and data analytics, they would have a more accurate, timely, and complete picture on which to base any decisions.

#### Integration of AI into defense bolsters cybersecurity of critical infrastructure.

DEPARTMENT OF DEFENSE, 2/12/2019 (“SUMMARY OF THE 2018 DEPARTMENT OF DEFENSE ARTIFICIAL INTELLIGENCE STRATEGY,” Retrieved 6/12/2022 from <https://media.defense.gov/2019/Feb/12/2002088963/-1/-1/1/SUMMARY-OF-DOD-AI-STRATEGY.PDF>.)

Protect our country and safeguard our citizens. AI will be used to protect the safety and security of U.S. citizens and to enable a stronger defense of U.S. critical infrastructure. Specifically, AI can enhance our ability to predict, identify, and respond to cyber and physical threats from a range of sources, strengthening the defense of the homeland from attack and discouraging attempts to disrupt U.S. infrastructure such as financial networks, electric grids, election processes, and medical systems.

#### Cyberattacks against infrastructure risk escalation to a nuclear conflict:

Michael T. Klare, 11/2019 (professor emeritus of peace and world security studies at Hampshire College and senior visiting fellow at the Arms Control Association, “Cyber Battles, Nuclear Outcomes? Dangerous New Pathways to Escalation,” <https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation>, Retrieved 9/4/2021)

Yet another pathway to escalation could arise from a cascading series of cyberstrikes and counterstrikes against vital national infrastructure rather than on military targets. All major powers, along with Iran and North Korea, have developed and deployed cyberweapons designed to disrupt and destroy major elements of an adversary’s key economic systems, such as power grids, financial systems, and transportation networks. As noted, Russia has infiltrated the U.S. electrical grid, and it is widely believed that the United States has done the same in Russia.12 The Pentagon has also devised a plan known as “Nitro Zeus,” intended to immobilize the entire Iranian economy and so force it to capitulate to U.S. demands or, if that approach failed, to pave the way for a crippling air and missile attack.13 The danger here is that economic attacks of this sort, if undertaken during a period of tension and crisis, could lead to an escalating series of tit-for-tat attacks against ever more vital elements of an adversary’s critical infrastructure, producing widespread chaos and harm and eventually leading one side to initiate kinetic attacks on critical military targets, risking the slippery slope to nuclear conflict. For example, a Russian cyberattack on the U.S. power grid could trigger U.S. attacks on Russian energy and financial systems, causing widespread disorder in both countries and generating an impulse for even more devastating attacks. At some point, such attacks “could lead to major conflict and possibly nuclear war.”14

### Plan

#### The United States federal government should substantially increase security cooperation with NATO by establishing standards to interoperate Artificial Intelligence technology into future NATO operations.

### 1AC – Solvency

#### Solvency

#### Facilitating NATO cooperation regarding standards to interoperate AI technology into future operations allows safe development and responsible use of AI technology.

Zoe Stanley-Lockman, 2022 (Defense and Strategic Studies, Nanyang Technological University, “NATO’s Role in Responsible AI Governance in Military Affairs,” [https://www.oxfordhandbooks.com/view/ 10.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69](https://www.oxfordhandbooks.com/view/%2010.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69), Retrieved 6/11/2022)

To maintain its relevance in a security architecture increasingly concerned with the way that technology shifts power dynamics and scales threats to international security, NATO has an incentive to foster cooperation, promote standards of practice, and incentivize Allied AI harmonization. It is strategically salient to facilitate a dialogue and engagement among Allies on AI, but it is practically important to use NATO’s position to facilitate Allied cooperation regarding standards to project the Alliance’s ability to interoperate in future operations. NATO standards aim to enhance interoperability among partners and successful implementation of strategy. More specifically, standards and certification are used to establish and implement requirements aligned with safe development and responsible use of technology. In addition to purely technical standards, NATO has operational standards that specify “conceptual, organizational or methodological requirements to enable materiel, installations, organizations or forces to fulfil their functions or missions.”51 In line with the definitions from STS and military innovation scholarship, standards can thus be seen as a mechanism to translate responsibility-derived state and organizational AI policy into actionable functions. In fact, NATO has set certain standards for the Allies and these standards subsequently become the norm. Within NATO, it is the NATO Standardization Office (NSO) that coordinates thousands of experts to align technological development with military requirements that can help enhance effectiveness, interoperability, and cohesion.52 While the NSO is primarily responsible for setting standards, other NATO entities—including in the NATO Science and Technology Organization (STO)—play important roles in implementing them and coordinating between national approaches.53 Certification frameworks and the promulgation of best practices can similarly help incentivize the transposition of RRI into military organizations, even if standardization is by no means a purely military governance tool. Both mechanisms, strategic policy planning and standards and certification, provide options for NATO to participate in AI governance regimes focusing on international security. NATO’s operationalization of these tools may hold important implications while implementing successful AI governmental regimes for Allies and other defense stakeholders. In the next section, we consider each mechanism within foundational issues, or pillars, to illustrate NATO’s role in AI governance.

#### NATO standards on AI are critical to prevent Chinese AI dominance.

Karlijn Jans, 7/10/2018 (holds Masters degrees from Maastricht University and King’s College London, “NATO Needs to Get Smarter About AI,” <https://www.atlanticcouncil.org/blogs/new-atlanticist/nato-needs-to-get-smarter-about-ai/>, Retrieved 6/15/2022)

The potential large-scale impact of AI has only been acknowledged on the fringes of security debates and by technology experts. The assessment and impact of AI systems, however, cannot be left to the “nerds.” NATO must begin to understand the impact of AI and have discussions about its potential use by and against the Alliance. US Secretary of Defense James Mattis said in his January 19 announcement of the US National Defense Strategy: “success does not go to the country that develops a new technology first, but rather, to the one that better integrates it and more swiftly adapts its way of fighting.” AI debates often devolve into arguments over “killer robots.” AI, however, will have a profound impact on NATO’s organization, operations, and cooperation. Its successful adoption will help the Alliance maintain its competitive edge and deterrence capability. For example, AI will profoundly change military organizational planning and coordination. The implementation of AI in the battlefield would mean advancing into a “hyper war” where current decision-making processes will be disrupted by the enormous speed of development and the ability of machine learning by AI applications. It is, therefore, key for the Alliance to implement AI applications into their militaries’ planning, operations, and coordination. AI also has huge potential for NATO’s intelligence, surveillance, and reconnaissance (ISR) activities. NATO is already leveraging AI to sift through and exploit the massive amounts of data generated by new and advanced weapon systems. New fifth-generation fighter planes are not only traditional weapon systems, but also important data collectors. AI could also assist in tracking down missile sites. These examples and the few initiatives started by NATO’s Allied Command Transformation (ACT) are pursued mainly on the Alliance’s operational and tactical levels. There have still been no direct deliberations about the implications of AI amongst NATO’s top political and strategic leaders. NATO is also at risk of AI being used against it by potential adversaries. As Tomáš Valášek of Carnegie Europe argued, “AI can be effectively deployed to undermine trust among countries fighting on the same side by discrediting their intelligence.” NATO missions and operations, which involve a high number of different countries and military organizations, are already heavily dependent on data and information exchange. Adversarial AI applications could influence, and even alter, information and communication amongst NATO allies while an operation is ongoing, creating confusion and distrust. NATO’s lack of action on AI is in stark contrast to the rise of China as a global AI leader. China released its 2020 AI ambitions and aims to be world leader by 2030. It is already developing complex sensor networks in the private sector with disrupting potential for the military domain. There is a real risk that China will be setting universal legal and technical standards for the use of AI if the Alliance, or nations by themselves, do not set out a clear AI strategy and have a real discussion on AI implementation and exploitation. For example, China requires Apple to adhere to different privacy settings for Chinese iPhone users. Data must be stored on Chinese servers, meaning Chinese intelligence services will have access to this information. Beijing has few privacy and ethical concerns about using AI, for example, facial recognition and surveillance by AI applications, which allows it to implement these technologies in the security sector much faster. Russia also recognizes the disruptive potential of AI, not just on the battlefield, but also in global power relations. Russian President Vladimir Putin said: “artificial intelligence is the future, not only for Russia but for all humankind…Whoever becomes the leader in this sphere will become the ruler of the world.” Russia is still lagging behind China and the United States in AI, but it has great ambitions. The Kremlin’s Military Industrial Committee has set a target of making 30 percent of military equipment robotic—and hence (partially) run by AI—by 2025. There are ongoing efforts by some member states to utilize AI and the United States has been ramping up its activities. The Pentagon’s Maven project aims to utilize the latest technology from Silicon Valley for military purposes (despite heavy criticism from the private sector over implementation of AI for lethal purposes) and the United States recently announced it will establish an official AI hub for its military, the Joint Artificial Intelligence Center. In Europe, individual European Union (EU) member states have been working on their individual AI strategies, with one of the most notable being the French. As for the European Union, only this year twenty-five of its members signed a Declaration of Cooperation on AI, declaring their intentions to join forces and engage in a European approach to deal with AI. But is it all too little, too late? “AI is on the verge of becoming a critical part of our societies” says former German State Secretary of Defense Katrin Suder. At the same time, AI and its implications have never been on the agenda at a NATO Summit. As the late French Prime Minister Georges Clemenceau once said: “War is too important a matter to be left to the military.” The same rings true for AI: AI is too important to be relegated to discussions on NATO’s operational and tactical levels. NATO’s political and strategic leaders need to lay out a vision for AI’s role in the Alliance, before it is too late.

#### Common ground among NATO on AI is key to ensuring tech leadership on a global scale.

Sebastian Sprenger, 4/27/2021 (Europe editor for Defense News, “NATO tees up negotiations on artificial intelligence in weapons,” <https://www.c4isrnet.com/artificial-intelligence/2021/04/27/nato-tees-up-negotiations-on-artificial-intelligence-in-weapons/>, Retrieved 6/15/2022)

COLOGNE, Germany — NATO officials are kicking around a new set of questions for member states on artificial intelligence in defense applications, as the alliance seeks common ground ahead of a strategy document planned for this summer. The move comes amid a grand effort to sharpen NATO’s edge in what officials call emerging and disruptive technologies, or EDT. Autonomous and artificial intelligence-enabled weaponry is a key element in that push, aimed at ensuring tech leadership on a global scale.

#### Allies will adopt NATO standards on AI beyond NATO structures and operations.

Zoe Stanley-Lockman, 2022 (Defense and Strategic Studies, Nanyang Technological University, “NATO’s Role in Responsible AI Governance in Military Affairs,” [https://www.oxfordhandbooks.com/view/ 10.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69](https://www.oxfordhandbooks.com/view/%2010.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69), Retrieved 6/11/2022)

To enhance legal interoperability, NATO can exert its influence on how Allies can develop and deploy AI consistent with their legal obligations through its unique standardization capacities. Historically, NATO has taken significant steps to bridge the legal gap between Allies on critical procedures that bridge responsible state behavior with such “troop-to-task” considerations. One instructive example from past operations is detention policies in non-international armed conflicts.78 The promulgation of detention standards illustrates the operational significance of NATO’s common legal procedures, even for coalitions of the willing that formally operate outside NATO structures. By way of background, the U.S.-led coalition in Afghanistan had internal debates regarding the 96-hour security detention time period.79 The United States advocated extending the 96-hour rule, where coalition partners insisted adhering to the NATO standard, even though it was not a NATO operation.80 Generally the detention example illustrates NATO legal standards providing clarity to non-NATO operations; in some cases, Allies adopt NATO standards as accepted thresholds that continue to inform coalition policies beyond NATO structures and operations. Implementing AI in future military operations will almost certainly complicate legal interoperability as there is a lack of uniform standards, as in the detention example. Even some of the more basic implementation measures will garner legal uncertainty and Allies will inevitably navigate with minimal legal clarity and no standard procedures. Despite the roots of the legal debate stemming from the question of lethality, the most pressing (and urgent) legal issues will address the integration of necessary AI-enablers, such as data gathering and sharing. Furthermore, NATO has coordinated initiatives to promote awareness of Allies’ legal obligations and has a dedicated office focusing on legality. This centralizes the institutional capacity to focus on alignment not only between the policies of NATO Allies, but coherence with the international community more broadly. Among others, the NATO Legal Practitioners’ Workshop and inter-organizational dialogue between NATO, the UN, and the International Committee of the Red Cross (ICRC), the latter of which has a delegation to NATO that provides legal training and education to practitioners.81 The NATO Office of Legal Affairs (OLA) itself can also play a central role in navigating the challenges to legal interoperability. As the example of detention standards illustrates, NATO has been successful in implementing legal standards which translated into operational clarity and coalition policy outside NATO operations.

#### NATO cooperation on AI sets important precedents to significantly boost AI development.

Robert HP Engels, 2022 (Vice President and CTO in Global Business Line Insights & Data, “NATO’s outlook on a responsible military adoption of AI,” <https://www.capgemini.com/no-no/2022/01/natos-outlook-on-a-responsible-military-adoption-of-ai/>, Retrieved 6/15/2022)

Or as Ulrike Franke, a senior policy fellow at the European Council on Foreign Relations, stated: “It’s better for the alliance to focus on the basics, like increased data sharing to develop and train military AI and cooperating on using artificial intelligence in logistics. (..) If NATO countries were to cooperate on that, that could create good procedures and set precedents.”[2] Training, at all levels of command, is certainly a key factor to cooperatively synchronize the development of maturity in both AI algorithms and operators, thus gradually building increased capacity and professionalism. NATO stresses the importance of an ethical approach and points out that “Allies and NATO must strive to protect the use of AI from such interference, manipulation, or sabotage, in line with the Reliability Principle of Responsible Use, also leveraging AI-enabled Cyber Defence applications.”. Furthermore, they point out the need to develop adequate security certification requirements for AI due to the fact that AI can impact critical infrastructure, capabilities and civil preparedness creating potential vulnerabilities, such as cyberspace, that could be exploited by certain state and non-state actors. The principles mentioned in the NATO strategy allow for modernization and use of AI without stifling innovation, on the contrary even: they might significantly boost the development of areas in artificial intelligence that have not been in focus until now. The AI strategy can point the direction how AI play a decisive role in how NATO’s partners cooperate, analyze and provide vital decision-making information faster and more comprehendible relevant to a wide range of potential challenges and threat situations.

#### Cooperation and alignment among NATO is critical for the alliance to maintain a competitive edge in AI:

Zoe Stanley-Lockman, 2022 (Defense and Strategic Studies, Nanyang Technological University, “NATO’s Role in Responsible AI Governance in Military Affairs,” [https://www.oxfordhandbooks.com/view/ 10.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69](https://www.oxfordhandbooks.com/view/%2010.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69), Retrieved 6/11/2022)

As NATO bodies and Allies prepare for the impact of AI on future military operations, the Alliance has its own responsibility to steward AI in ways that, inter alia, promote cohesion between democratic countries, prevent risks, shore up interoperability, project deterrence, and ensure stability.7 To achieve these aims, cooperation and alignment are critical for the Alliance to maintain a competitive edge and promote further innovation in alignment with shared values.

## Case – Top Level

### UQ – NATO Role In AI Uncertain

#### NATO’s current role in emerging AI regimes is uncertain.

Zoe Stanley-Lockman, 2022 (Defense and Strategic Studies, Nanyang Technological University, “NATO’s Role in Responsible AI Governance in Military Affairs,” [https://www.oxfordhandbooks.com/view/ 10.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69](https://www.oxfordhandbooks.com/view/%2010.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69), Retrieved 6/11/2022)

In this chapter, we explore a role for the North Atlantic Treaty Organization (NATO) in the emerging military AI governance architecture. NATO (or the Alliance) is a military and political alliance among 30 contributing member states that are committed to collective security. Much of NATO’s original purpose and current core tasks arguably leave the Alliance’s role uncertain in international governance regimes contending with the impact of emerging technology on international politics.1 As global powers compete for the economic and military capabilities that AI can offer, the Alliance has the enormously challenging task of navigating varying political realities and capabilities of Allies, all while effectively recalibrating strategic relationships in the coming years. Recognizing technological change as a key variable, NATO has begun to adapt its organizational composition and strategic footing to increase the Alliance’s capacity to meet emerging security challenges for military capability development trends of both its own members and those of competitors or adversaries.

### Solvency – Interoperability

#### Interoperability is necessary to prevent disruptions from attacks.

Zoe Stanley-Lockman, 2022 (Defense and Strategic Studies, Nanyang Technological University, “NATO’s Role in Responsible AI Governance in Military Affairs,” [https://www.oxfordhandbooks.com/view/ 10.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69](https://www.oxfordhandbooks.com/view/%2010.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69), Retrieved 6/11/2022)

The third pillar identifies safety and security of AI systems as prerequisite to trustworthy and responsible AI in any context, but especially so for the conduct of military activity. At the NATO level, Allied forces must ensure their systems interoperate safely and predictably both to ensure effective command and control (C2) internally, and to prevent disruptions from attacks. It is a foundational facet of coordination that shows the overlap between NATO interests in military effectiveness and incentivization for responsible innovation.

### Solvency – NATO Key to AI Development

#### NATO’s resources and leadership allow for safe and secure AI development.

Zoe Stanley-Lockman, 2022 (Defense and Strategic Studies, Nanyang Technological University, “NATO’s Role in Responsible AI Governance in Military Affairs,” [https://www.oxfordhandbooks.com/view/ 10.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69](https://www.oxfordhandbooks.com/view/%2010.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69), Retrieved 6/11/2022)

NATO has an important role to play in military standardization and Allied policy planning for safe, secure, and interoperable AI. This includes the coordinating role of the Conference of National Armaments Directors and the Command, Control and Consultation Board to implement complementary acquisition processes that fuse AI adoption measures with safety responsibilities. Furthermore, entities including STO and NSO have a significant role setting the technical baseline and promulgating materiel standards that provide the technical framework for safety and security. Although their staffs are themselves small, they both convene hundreds, if not thousands, of subject matter experts in working groups. As such they both offer unique technical networks to help shape safety and security in a way that minimize risk in operations. NATO’s resources and leadership are vital to using standards and coalition policy to instill safe and secure technological development, a necessary condition to interoperable and successful future operations.

#### The NATO framework allows NATO to maintain its technological edge.

Rob Murray, 9/1/2020 (head of the Innovation Unit in NATO’s Emerging Security Challenges Division, “Building a resilient innovation pipeline for the Alliance,” Retrieved 6/12/2022 from [https://www.nato.int/docu/review/articles/ 2020/09/01/building-a-resilient-innovation-pipeline-for-the-alliance/index.html](https://www.nato.int/docu/review/articles/%202020/09/01/building-a-resilient-innovation-pipeline-for-the-alliance/index.html))

The first step towards fixing the fragmentation of Allied disruptive innovation is for Allies, through the NATO framework, to focus on agreed innovation priorities. This will allow them to pick winners and invest public patient capital – the private sector is unlikely to invest venture capital as the risk is simply too high (nations tend not to go out of business and can take on such uncertainty). This direction and investment will help to maintain NATO’s overarching technological edge. Indeed, as Keynes and Weber argued, the ability to make things happen that otherwise would not needs a combination of technological, policy and bureaucratic skills matched by investment. Step 2: leverage the comparative advantage of the Alliance If Allies are to achieve most defence at less cost with least delay built with wisdom and efficiency, then it is logical to leverage those natural advantages that geography and skill sets afford NATO member states. A network of the finest universities across the Alliance should be established and resourced to allow cutting-edge multinational research to take place across multiple disruptive technologies simultaneously. Perhaps Stanford could lead on relevant AI research, while Delft and the University of Chicago partner on quantum; maybe Imperial College London looks at biotechnologies with Johns Hopkins University, while Tallinn University centres its efforts on next generation cyber defences; and the École Polytechnique and Massachusetts Institute of Technology examine future telecommunication needs. The point is Allies will need to leverage such networks of universities in conjunction with national government research labs to provide maximum innovation coherence. The diversity of multinational, multi-disciplined defence and security innovation research teams, which NATO can engender, is a huge asset and is the Alliance’s competitive advantage.

### Solvency – Plan Allows Building Up of AI

#### Interoperability of AI with allied partners is key to developing the full potential of AI.

DEPARTMENT OF DEFENSE, 2/12/2019 (“SUMMARY OF THE 2018 DEPARTMENT OF DEFENSE ARTIFICIAL INTELLIGENCE STRATEGY,” Retrieved 6/12/2022 from <https://media.defense.gov/2019/Feb/12/2002088963/-1/-1/1/SUMMARY-OF-DOD-AI-STRATEGY.PDF>.)

Become a pioneer in scaling AI across a global enterprise. We recognize the tremendous utility of AI to a wide range of capabilities. To realize this potential fully, we must pioneer AI approaches across the full scale of our global defense enterprise in a manner that is Joint and interoperable with interagency, allied, and coalition partners. Specifically, DoD will identify and implement new organizational approaches, establish key AI building blocks and standards, develop and attract AI talent, and introduce new operational models that will enable DoD to take advantage of AI systematically at enterprise scale.

#### International alliance partnerships allow the overcoming of AI challenges.

DEPARTMENT OF DEFENSE, 2/12/2019 (“SUMMARY OF THE 2018 DEPARTMENT OF DEFENSE ARTIFICIAL INTELLIGENCE STRATEGY,” Retrieved 6/12/2022 from <https://media.defense.gov/2019/Feb/12/2002088963/-1/-1/1/SUMMARY-OF-DOD-AI-STRATEGY.PDF>.)

Evolving international alliances and partnerships. An extended network of mutually beneficial alliances and partnerships provides a durable means of overcoming global AI challenges, deterring aggression, and supporting stability through cooperation. Foreign allies and partners offer critical perspectives and talent that can be leveraged through personnel exchanges, combined portfolio planning, and the deepened interoperability and trust that comes from collaborative AI development and deployment.

### Solvency – China/Russia Counterweight

#### American leadership in AI is necessary to reclaim the global AI leadership position from China.

Christie Lawrence & Sean Cordey, 2020, (Belfer Center for Science and International Affairs, Harvard Kennedy School, “The Case for Increased Transatlantic Cooperation on Artificial Intelligence,” <https://www.belfercenter.org/publication/case-increased-transatlantic-cooperation-artificial-intelligence>, Retrieved 6/12/2022)

United States: The United States views American leadership in AI as necessary to safeguard American values and maintain defense and economic superiority. Recognizing the need to develop a national AI approach and reclaim the AI R&D global leadership position from China, which had already surpassed the US in several research output metrics by 2016,10 the Obama Administration developed an AI R&D prioritization in October 2016.11 Building on this urgency, the Trump Administration has prioritized AI and established the American AI Initiative in February 2019.12 This Initiative identified the need for a whole-of-government approach to prioritize AI R&D and deployment throughout the entire federal government. The Initiative also identifies the need to grow the US AI workforce, set national and global norms and standards, and work with industry and allies to promote an AI environment favorable to the United States.13

#### A unifying strategy with European allies is necessary to provide a counter-weight to Chinese and Russian AI military innovation.

Lena Trabucco, 10/5/2020 (Research Assistant at the Centre for Military Studies at the University of Copenhagen, “AI Partnership for Defense is a Step in the Right Direction – But Will Face Challenges,” <http://opiniojuris.org/2020/10/05/ai-partnership-for-defense-is-a-step-in-the-right-direction-but-will-face-challenges/>, Retrieved 6/14/2022)

Few solutions have been offered to the US for maneuvering Europe’s competing visions for military AI, and how to effectively court hesitant European nations. And the current absence of Germany from the AI partnership suggests the US still hasn’t figured it out. If the goal is to expand the partnership as a counter-weight to Chinese and Russian AI military innovation, then the US will have to address the foundational differences that some European allies have regarding the role of military AI in order to bring the partnership under a unifying strategy.

## Case – AI Leadership Advantage

### UQ – US is losing AI Arms Race to China

#### The US is losing the AI arms race to China.

Benjamin Boudreaux, 1/11/2019 (professor at the Pardee RAND Graduate School, “Does the U.S. Face an AI Ethics Gap?” [https://www.realcleardefense.com/articles/2019/01/11/ does\_the\_us\_face\_an\_ai\_ethics\_gap\_114095.html](https://www.realcleardefense.com/articles/2019/01/11/%20does_the_us_face_an_ai_ethics_gap_114095.html), Retrieved 6/12/2022)

Members of Congress, the U.S. military, and prominent technologists have raised the alarm that the U.S. is at risk of losing an Artificial Intelligence (AI) arms race. China already has leveraged strategic investment and planning, access to massive data, and suspect business practices to surpass the U.S. in some aspects of AI implementation. There are worries that this competition could extend to the military sphere with serious consequences for U.S. national security.

#### China is catching the US in the AI field.

John R. Allen, 3/24/2021 (President of the Brookings Institution, “It is time to negotiate global treaties on artificial intelligence,” <https://www.brookings.edu/blog/techtank/2021/03/24/it-is-time-to-negotiate-global-treaties-on-artificial-intelligence/>, Retrieved 6/15/2022)

The U.S. National Security Commission on Artificial Intelligence recently made the news when its members warned that America faces a national security crisis due to insufficient investment in artificial intelligence and emerging technologies. Commission Vice Chair Robert Work argued “we don’t feel this is the time for incremental budgets … This will be expensive and requires significant change in the mindset at the national, and agency, and Cabinet levels.” Commission Chair Eric Schmidt extended those worries by saying “China is catching the US” and “competition with China will increase.”

### UQ – NATO Faces Global AI Tech Race

#### The US & China are engaged in an AI arms race that will determine the future balance of power.

Rod Thornton, 6/17/2019 (Senior Lecturer in the Centre for Defence Education Research and Analysis, UK Defence Academy/Defence Studies Department, King’s College London, “One to ponder: the UK’s ethical stance on the use of Artificial Intelligence in weapons systems,” [https://defenceindepth.co/2019/06/17/ one-to-ponder-the-uks-ethical-stance-on-the-use-of-artificial-intelligence-in-weapons-systems/](https://defenceindepth.co/2019/06/17/%20one-to-ponder-the-uks-ethical-stance-on-the-use-of-artificial-intelligence-in-weapons-systems/), Retrieved 6/12/2022)

Among the world’s major states an AI arms race is underway. The US and China, with their huge spending on AI and with their ability to draw on the expertise of indigenous high-tech firms (such as Google, Amazon, Huawei, Tencent, etc), are way ahead of other states in the development of AI systems for their militaries. They understand that to be left behind in such development risks facing not just battlefield disadvantage but also actual strategic defeat. Weapons based on AI have the potential to become even more powerful than nuclear weapons. One Russian source, for instance, sees a future ‘Third Word War’ being won ‘within seconds’ by using AI-enabled cyber warfare. As Vladimir Putin has said on several occasions, ‘whoever becomes the leader in this [AI] sphere will become ruler of the world’.

#### NATO faces a global AI tech race.

Edward Hunter Christie, 11/24/2020 (Deputy Head of the Innovation Unit, Emerging Security Challenges Division @ NATO, “Artificial Intelligence at NATO: dynamic adoption, responsible use,” Retrieved June 12, 2022 from <https://www.nato.int/docu/review/articles/2020/11/24/artificial-intelligence-at-nato-dynamic-adoption-responsible-use/index.html>)

As noted in the first article in this series on innovation at NATO, the Alliance faces a global technology adoption race. Rival powers are leveraging new technologies to pursue the dual goal of greater economic competitiveness alongside greater military capabilities. The Allies face a range of challenges as they seek to exploit emerging and disruptive technologies. These challenges are based on two interrelated pillars of work: ensuring a dynamic adoption of new technologies and governing them responsibly. Artificial Intelligence (AI) is at the heart of these considerations.

### IL – Competitors in AI Undermine LIO

#### Competitors investments in AI threaten to destabilize the international liberal order.

DEPARTMENT OF DEFENSE, 2/12/2019 (“SUMMARY OF THE 2018 DEPARTMENT OF DEFENSE ARTIFICIAL INTELLIGENCE STRATEGY,” Retrieved 6/12/2022 from <https://media.defense.gov/2019/Feb/12/2002088963/-1/-1/1/SUMMARY-OF-DOD-AI-STRATEGY.PDF>.)

Thoughtful, responsible, and human-centered adoption of AI in the Department of Defense has the potential to strengthen our national security and transform the speed and agility of our operations. Our adversaries and competitors are aggressively working to define the future of these powerful technologies according to their interests, values, and societal models. Their investments threaten to erode U.S. military advantage, destabilize the free and open international order, and challenge our values and traditions with respect to human rights and individual liberties.

### IL – Tech Key to US Heg

#### The US will use new technology to cement its hegemonic lead in international relations.

Matthew Kroenig, 2021 (Professor in the Department of Government and the Edmund A. Walsh School of Foreign Service at Georgetown University, “Will Emerging Technology Cause Nuclear War?: Bringing Geopolitics Back In,” <https://www.airuniversity.af.edu/Portals/10/SSQ/documents/Volume-15_Issue-4/D-Kroenig.pdf>, Retrieved 6/15/2022)

In emphasizing the divergent positions of the United States of America and its nuclear- armed rivals in the international system, this article also contributes to a growing body of literature that takes seriously hierarchy in international relations theory.9 The United States, the international sys¬tem’s leader for the past several decades, is likely to use new technology to reinforce its advantageous position within the existing international order. China and Russia will most likely employ new technology in bids to erode America’s privileged position. Analyses not grounded in an understanding of these states’ different positions in the prevailing international order risk overlooking this important source of variation in conflict behavior and nuclear-escalation dynamics. This framing of the problem leads to a different set of policy implica-tions. The United States and its Allies and partners must retain second- strike capabilities, preserve current power distributions, maintain an in-novation edge, and prevent the proliferation of destabilizing military technologies to revisionist powers.

### IL – AI Co-op Solves ILO

#### International AI Cooperation bolsters the liberal international order.

Christie Lawrence & Sean Cordey, 2020, (Belfer Center for Science and International Affairs, Harvard Kennedy School, “The Case for Increased Transatlantic Cooperation on Artificial Intelligence,” <https://www.belfercenter.org/publication/case-increased-transatlantic-cooperation-artificial-intelligence>, Retrieved 6/12/2022)

Health-related joint R&D is already a top priority within existing EU-US S&T collaboration and benefits from a reciprocal funding agreement between the US NIH and the EU.42 Covid-19 and prioritization by both the US and the EU to develop AI applications for healthcare further the potential for stronger US-EU AI collaboration in this sector. The environmental sciences sector similarly benefits from preexisting strong transatlantic collaboration and increased focus for AI-related research. The EU’s focus on developing a “European Green New Deal” will only raise the importance and quantity of European R&D in this field.43 Greater defense-related AI cooperation is increasingly viewed as an imperative by the US, with the DOD Artificial Intelligence Strategy highlighting the need for international AI cooperation to “safeguard a free and open international order.”44 Recent positive visits and collaboration between the JAIC, NATO, and European allies indicate AI collaboration in the defense sector will grow.45

### Solvency – AI Leadership Solves

#### NATO is a unique position to win the international tech race.

Rob Murray, 9/1/2020 (head of the Innovation Unit in NATO’s Emerging Security Challenges Division, “Building a resilient innovation pipeline for the Alliance,” Retrieved 6/12/2022 from [https://www.nato.int/docu/review/articles/ 2020/09/01/building-a-resilient-innovation-pipeline-for-the-alliance/index.html](https://www.nato.int/docu/review/articles/%202020/09/01/building-a-resilient-innovation-pipeline-for-the-alliance/index.html))

The Alliance’s transatlantic nature places it in a unique position within the international order to provide both demand-side policies and supply-side resources that can genuinely build such a pipeline, creating not only innovations but entirely new markets – as Eisenhower noted: the foundation of military strength is economic strength. Recent history would suggest, the model of democracy and Allied governments’ willingness to make big bets on mission-oriented technology does indeed create new markets and it is this model, underpinned by shared values, which will be key to NATO’s longer term success.

#### NATO’s operationalization of AI ethics allows NATO to shape technological innovation against illiberal regimes.

Zoe Stanley-Lockman, 2022 (Defense and Strategic Studies, Nanyang Technological University, “NATO’s Role in Responsible AI Governance in Military Affairs,” [https://www.oxfordhandbooks.com/view/ 10.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69](https://www.oxfordhandbooks.com/view/%2010.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69), Retrieved 6/11/2022)

We explore how NATO can operationalize the debate around ethics and values of military AI to garner coordination and continue progress of EDT harmonization among partners. Building on the theoretical discussion from STS and military innovation literature above, the adoption of technologies that reinforce values serves the strategic interest of NATO to shape technological innovation against current waves of illiberalism.

### Solvency – A2: China/Russia Say No

#### The technologically advanced democracies must come together to create effective norms for AI—crucial to get Russia and China on board.

John R. Allen, 3/24/2021 (President of the Brookings Institution, “It is time to negotiate global treaties on artificial intelligence,” <https://www.brookings.edu/blog/techtank/2021/03/24/it-is-time-to-negotiate-global-treaties-on-artificial-intelligence/>, Retrieved 6/15/2022)

That said, there are increasingly calls for the technologically advanced democracies to come together to aggregate their capacities, as well as leveraging their accumulated moral strength, to create the norms and ethical behaviors essential to governing the applications of AI and other technologies. Creating a reservoir of humanitarian commitment among the democracies will be vital to negotiating from a position of moral strength with the Chinese, Russians, and other authoritarian states whose views on the future of AI vary dramatically from ours.

## Case – Conflict Resolution Advantage

### Solvency – AI Solves Conflict Resolution

#### Building AI safety is necessary to develop countermeasures against enemy attacks.

Zoe Stanley-Lockman, 2022 (Defense and Strategic Studies, Nanyang Technological University, “NATO’s Role in Responsible AI Governance in Military Affairs,” [https://www.oxfordhandbooks.com/view/ 10.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69](https://www.oxfordhandbooks.com/view/%2010.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69), Retrieved 6/11/2022)

Mitigating these types of risks is typically done in testing, evaluation, validation and verification (TEVV) and in experimentation activities.92 Yet AI cannot be validated and verified the way traditional software systems are because there is no guarantee that an AI system will perform in the real world as it does in a testing environment, and because lifelong-learning systems will perform differently over their lifecycle. Having robust assurance and TEVV processes in place are also important for operators to build trust in the systems they are meant to use, as well as for citizenries and coalition partners at large to see that accountability procedures still apply. As such, building institutional procedures to govern AI safety and security is necessary to build trust in the use of the technology—as well as to develop countermeasures and defensive systems that protect against adversarial threats.

### Solvency – AI Integration Solves Nuclear Stability

#### US and allied leadership in new technology enhances nuclear strategic stability.

Matthew Kroenig, 2021 (Professor in the Department of Government and the Edmund A. Walsh School of Foreign Service at Georgetown University, “Will Emerging Technology Cause Nuclear War?: Bringing Geopolitics Back In,” <https://www.airuniversity.af.edu/Portals/10/SSQ/documents/Volume-15_Issue-4/D-Kroenig.pdf>, Retrieved 6/15/2022)

The next section provides a novel framework, grounded in the prevail¬ing geopolitical context, for understanding how new technology might affect nuclear strategic stability. Namely, the spread of new technology to the United States and its Allies and partners—status quo powers at the core of the existing international system—will tend to shore up sources of strategic stability. Conversely, the spread of new technology to revisionist powers China and Russia presents the greatest risk of conventional con¬flict that might escalate and threaten nuclear strategic stability.

#### Integration of AI into military systems can affect crisis stability and nuclear weapons.

Michael C. Horowitz, 2018 (Professor at the University of Pennsylvania, “Artificial Intelligence, International Competition, and the Balance of Power,” Retrieved 6/11/2022 from <https://tnsr.org/2018/05/artificial-intelligence-international-competition-and-the-balance-of-power/>)

From a research perspective, one limitation of this article is its focus on the balance of power and international competition, as opposed to specific uses of AI. Future research could investigate particular implementations of AI for military purposes or other critical questions. Specific implementations could include the use of autonomous weapon systems able to select and engage targets on their own. These systems could raise ethical and moral questions about human control,116 as well as practical issues surrounding war that is fought at “machine speed.”117 The integration of AI into early-warning systems and its ability to aid in rapid targeting could also affect crisis stability and nuclear weapons.118 In the broader security realm, AI will affect human security missions.119 By laying out an initial framework for how military applications of narrow AI could structure international competition and the balance of power, this article lays the groundwork for thinking through these questions in the future.

## Case – Add-Ons

### Democracy Add-On – 2AC

#### Transatlantic AI cooperation is necessary to bolster democratization.

Christie Lawrence & Sean Cordey, 2020, (Belfer Center for Science and International Affairs, Harvard Kennedy School, “The Case for Increased Transatlantic Cooperation on Artificial Intelligence,” <https://www.belfercenter.org/publication/case-increased-transatlantic-cooperation-artificial-intelligence>, Retrieved 6/12/2022)

The Case for Transatlantic Cooperation There are three critical, interconnected arguments for transatlantic cooperation to ensure AI innovation protects the security, values, and economic interests of the United States and the European Union. 1.Global Good: Transatlantic AI partnerships and cooperation encourages innovation and applications that enhance human welfare, strengthen the economies of the US and the EU, and advance global security. 2.Great Power Competition: US-EU leadership of like-minded nations is needed in this age of great power competition to tip the scales against efforts by authoritarian governments—particularly, China and Russia—to undermine democracies. 3.Shared Values: The US and the EU share fundamental values and would benefit from joint efforts to establish AI norms that would more effectively advance their common vision of AI and ripple throughout the global AI ecosystem. Although the US consistently sounds the alarm bells around China’s AI aspirations and the EU urges international efforts against AI that violates fundamental rights, increasingly noting China’s actions with concern,8 little concrete international action has taken place. The United States and the European Union’s ongoing reassessment of their respective AI strategies and legislation9 provides a window of opportunity to align and collaborate. Transatlantic AI cooperation is at a critical juncture and the United States and the European Union should seize this opportunity to take concrete actions.

#### Preserving democracy is the only way to avert existential catastrophe.

Noam Chomsky, 5/27/2019 (American linguist, philosopher, cognitive scientist, historian, social critic, and political activist. Sometimes called "the father of modern linguistics", Chomsky is also a major figure in analytic philosophy and one of the founders of the field of cognitive science, “Chomsky: Nuclear Weapons, Climate Change & the Undermining of Democracy Threaten Future of Planet,” [https://www.democracynow.org/2019/5/27/ chomsky\_nuclear\_weapons\_climate\_change\_the](https://www.democracynow.org/2019/5/27/%20chomsky_nuclear_weapons_climate_change_the), Retrieved 8/4/2021)

NOAM CHOMSKY: I want to make a couple of remarks below about the severe difficulty of maintaining and instituting democracy, the powerful forces that have always opposed it, the achievements of somehow salvaging and enhancing it, and the significance of that for the future. But first, a couple of words about the challenges that we face, which you heard enough about already and you all know about. I don’t have to go into them in detail. To describe these challenges as “extremely severe” would be an error. The phrase does not capture the enormity of the kinds of challenges that lie ahead. And any serious discussion of the future of humanity must begin by recognizing a critical fact, that the human species is now facing a question that has never before arisen in human history, question that has to be answered quickly: Will human society survive for long? Well, as you all know, for 70 years we’ve been living under the shadow of nuclear war. Those who have looked at the record can only be amazed that we’ve survived this far. Time after time it’s come extremely close to terminal disaster, even minutes away. It’s kind of a miracle that we’ve survived. Miracles don’t go on forever. This has to be terminated, and quickly. The recent Nuclear Posture Review of the Trump administration dramatically increases the threat of conflagration, which would in fact be terminal for the species. We may remember that this Nuclear Posture Review was sponsored by Jim Mattis, who was regarded as too civilized to be retained in the administration—gives you a sense of what can be tolerated in the Trump-Pompeo-Bolton world. Well, there were three major arms treaties: the ABM Treaty, Anti-Ballistic Missile Treaty; the INF Treaty, Intermediate Nuclear Forces; the New START treaty. The U.S. pulled out of the ABM Treaty in 2002. And anyone who believes that anti-ballistic missiles are defensive weapons is deluded about the nature of these systems. The U.S. has just pulled out of the INF Treaty, established by Gorbachev and Reagan in 1987, which sharply reduced the threat of war in Europe, which would very quickly spread. The background of that signing of that treaty was the demonstrations that you just saw depicted on the film. Massive public demonstrations were the background for leading to a treaty that made a very significant difference. It’s worth remembering that and many other cases where significant popular activism has made a huge difference. The lessons are too obvious to enumerate. Well, the Trump administration has just withdrawn from the INF Treaty; the Russians withdrew right afterwards. If you take a close look, you find that each side has a kind of a credible case saying that the opponent has not lived up to the treaty. For those who want a picture of how the Russians might look at it, the Bulletin of Atomic Scientists, the major journal on arms control issues, had a lead article a couple weeks ago by Theodore Postol pointing out how dangerous the U.S. installations of anti-ballistic missiles on the Russian border—how dangerous they are and can be perceived to be by the Russians. Notice, on the Russian border. Tensions are mounting on the Russian border. Both sides are carrying out provocative actions. We should—in a rational world, what would happen would be negotiations between the two sides, with independent experts to evaluate the charges that each is making against the other, to lead to a resolution of these charges, restore the treaty. That’s a rational world. But it’s unfortunately not the world we’re living in. No efforts at all have been made in this direction. And they won’t be, unless there is significant pressure. Well, that leaves the New START treaty. The New START treaty has already been designated by the figure in charge, who has modestly described himself as the greatest president in American history—he gave it the usual designation of anything that was done by his predecessors: the worst treaty that ever happened in human history; we’ve got to get rid of it. If in fact—this comes up for renewal right after the next election, and a lot is at stake. A lot is at stake in whether that treaty will be renewed. It has succeeded in very significantly reducing the number of nuclear weapons, to a level way above what they ought to be but way below what they were before. And it could go on. Well, meanwhile, global warming proceeds on its inexorable course. During this millennium, every single year, with one exception, has been hotter than the last one. There are recent scientific papers, James Hansen and others, which indicate that the pace of global warming, which has been increasing since about 1980, may be sharply escalating and may be moving from linear growth to exponential growth, which means doubling every couple of decades. We’re already approaching the conditions of 125,000 years ago, when the sea level was about roughly 25 feet higher than it is today, with the melting, the rapid melting, of the Antarctic, huge ice fields. We might—that point might be reached. The consequences of that are almost unimaginable. I mean, I won’t even try to depict them, but you can figure out quickly what that means. Well, meanwhile, while this is going on, you regularly read in the press euphoric accounts of how the United States is advancing in fossil fuel production. It’s now surpassed Saudi Arabia. We’re in the lead of fossil fuel production. The big banks, JPMorgan Chase and others, are pouring money into new investments in fossil fuels, including the most dangerous, like Canadian tar sands. And this is all presented with great euphoria, excitement. We’re now reaching energy independence. We can control the world, determine the use of fossil fuels in the world. Barely a word on what the meaning of this is, which is quite obvious. It’s not that the reporters, commentators don’t know about it, that the CEO of the banks don’t know about it. Of course they do. But these are kind of institutional pressures that just are extremely hard to extricate themselves from. You can put yourself in the—try to put yourself in the position of, say, the CEO of JPMorgan Chase, the biggest bank, which is spending large sums in investment in fossil fuels. He certainly knows everything that you all know about global warming. It’s no secret. But what are the choices? Basically he has two choices. One choice is to do exactly what he’s doing. The other choice is to resign and be replaced by somebody else who will do exactly what he’s doing. It’s not an individual problem. It’s an institutional problem, which can be met, but only under tremendous public pressure. And we’ve recently seen, very dramatically, how it can—how the solution can be reached. A group of young people, Sunrise Movement, organized, got to the point of sitting in in congressional offices, aroused some interest from the new progressive figures who were able to make it to Congress. Under a lot of popular pressure, Alexandria Ocasio-Cortez, joined by Ed Markey, actually placed the Green New Deal on the agenda. That’s a remarkable achievement. Of course, it gets hostile attacks from everywhere: It doesn’t matter. A couple of years ago it was unimaginable that it would be discussed. As the result of the activism of this group of young people, it’s now right in the center of the agenda. It’s got to be implemented in one form or another. It’s essential for survival, maybe not in exactly that form, but some modification of it. Tremendous change achieved by the commitment of a small group of young people. That tells you the kind of thing that can be done. Meanwhile, the Doomsday Clock of the Bulletin of Atomic Scientists last January was set at two minutes to midnight. That’s the closest it’s been to terminal disaster since 1947. The announcement of the settlement—of the setting mentioned the two major familiar threats: the threat of nuclear war, which is increasing, threat of global warming, which is increasing further. And it added a third for the first time: the undermining of democracy. That’s the third threat, along with global warming and nuclear war. And that was quite appropriate, because functioning democracy offers the only hope of overcoming these threats. They are not going to be dealt with by major institutions, state or private, acting without massive public pressure, which means that the means of democratic functioning have to be kept alive, used the way the Sunshine Movement did it, the way the great mass demonstration in the early ’80s did it, and the way we continue today.

### Democracy Add-On – Solves War

#### The best and newest studies verify the link between democratization and peace:

Kosuke Imai 20, PhD in Political Science @ Harvard, Professor in the Department of Government and the Department of Statistics at Harvard University, “Robustness of Empirical Evidence for the Democratic Peace: A Nonparametric Sensitivity Analysis”, https://imai.fas.harvard.edu/research/files/dempeace.pdf

Abstract The democratic peace—the idea that democracies rarely fight one another— has been called “the closest thing we have to an empirical law in the study of international relations.” Yet, some contend that this relationship is spurious and suggest alternative explanations. Unfortunately, in the absence of randomized experiments, we can never rule out the possible existence of such confounding biases. Rather than commonly used regression-based approaches, we apply a nonparametric sensitivity analysis. We show that overturning the negative association between democracy and conflict would require a confounder that is forty-seven times more prevalent in democratic dyads than in other dyads. To put this number in context, the relationship between democracy and peace is at least five times as robust as that between smoking and lung cancer. To explain away the democratic peace, therefore, scholars would have to find far more powerful confounders than those already identified in the literature.

### NATO Add-On – 2AC

#### Adapting to emerging AI technologies is key to keeping NATO as a relevant institution.

Zoe Stanley-Lockman, 2022 (Defense and Strategic Studies, Nanyang Technological University, “NATO’s Role in Responsible AI Governance in Military Affairs,” [https://www.oxfordhandbooks.com/view/ 10.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69](https://www.oxfordhandbooks.com/view/%2010.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69), Retrieved 6/11/2022)

New power distributions around AI and adjacent dual-use technologies are among the motivating factors causing the Alliance to reconsider whether its technological superiority may be threatened in the years ahead, as reflected in the 2019 Emerging and Disruptive Technologies (EDTs) Roadmap2 and, more recently, the NATO 2030 process.3 NATO navigates these changes and then approaches AI-accelerated changes to the international security environment in a highly political context. Notably, in 2019, French President Emmanuel Macron surprised many European counterparts by declaring NATO “brain-dead,” a warning wrapped in an even larger warning of trans-Atlantic security divisions.4 The critique that NATO is a “brain-dead” or “irrelevant” institution has existed in some form since the end of the Cold War.5 As NATO combats global perceptions of organizational irrelevance, there is a reason to push for bureaucratic adaptation to better manage technology-driven changes in the future. As such, despite some warnings to the contrary, Allies have an incentive to keep NATO a relevant military institution and ensure that it adapts to emerging threats and for future military contexts. The comment from President Macron helped prompt the NATO 2030 agenda, which is currently taking shape to increase the Alliance’s role as a political actor and as an organization with a greater focus on EDTs.6

#### Strong NATO solves nuclear war

Beauchamp ’18 (Zack Beauchamp, senior reporter at Vox, where he covers global politics and ideology, and a host of Worldly, Vox's podcast on covering foreign policy and international relations, “How Trump is killing America’s alliances”, Vox, <https://www.vox.com/world/2018/6/12/17448866/trump-south-korea-alliance-trudeau-g7>, 2018)

How the weakening of American alliances could lead to a massive war. There has never, in human history, been an era as peaceful as our own. This is a hard truth to appreciate, given the horrible violence ongoing in places like Syria, Yemen, and Myanmar, yet the evidence is quite clear. Take a look at this chart from the University of Oxford’s Max Roser. It tracks the number of years in a given time period in which “great powers” — meaning the militarily and economically powerful countries at that time — were at war with each other over the course of the past 500 years. The decline is unmistakable: [[TABLE OMITTED]] This data should give you some appreciation for how unique, and potentially precarious, our historical moment is. For more than 200 years, from 1500 to about 1750, major European powers like Britain and France and Spain were warring constantly. The frequency of conflict declined in the 19th and 20th centuries, but the wars that did break out — the Napoleonic conflicts, both world wars — were particularly devastating. The past 70 years without great power war, a period scholars term “the Long Peace,” is one of history’s most wonderful anomalies. The question then becomes: Why did it happen? And could Trump mucking around with a pillar of the global order, American alliances, put it in jeopardy? The answer to the second question, ominously, appears to be yes. There is significant evidence that strong American alliances — most notably the NATO alliance and US agreements to defend Japan and South Korea — have been instrumental in putting an end to great power war. “As this alliance system spreads and expands, it correlates with this dramatic decline, this unprecedented drop, in warfare,” says Michael Beckley, a professor of international relations at Tufts University. “It’s a really, really strong correlation.” A 2010 study by Rice’s Leeds and the University of Kentucky’s Jesse C. Johnson surveyed a large data set on alliances between 1816 and 2000. They found that countries in defensive alliances were 20 percent less likely to be involved in a conflict, on average, than countries that weren’t. This holds true even after you control for other factors that would affect the likelihood of war, like whether a country is a democracy or whether it has an ongoing dispute with a powerful neighbor. In a follow-up paper, Leeds and Johnson looked at the same data set to see whether certain kinds of alliances were more effective at protecting its members than others. Their conclusion is that alliances deter war best when their members are militarily powerful and when enemies take seriously the allies’ promise to fight together in the event of an attack. The core US alliances — NATO, Japan, and South Korea — fit these descriptors neatly. A third study finds evidence that alliances allow allies to restrain each other from going to war. Let’s say Canada wants to get involved in a conflict somewhere. Typically, it would discuss its plans with the United States first — and if America thinks it’s a bad idea, Canada might well listen to them. There’s strong statistical evidence that countries don’t even try to start some conflicts out of fear that an ally would disapprove. These three findings all suggest that NATO and America’s East Asian alliances very likely are playing a major role in preserving the Long Peace — which is why Trump’s habit of messing around with alliances is so dangerous. According to many Russia experts, Vladimir Putin’s deepest geostrategic goal is “breaking” NATO. The member states where anyone would expect him to test NATO’s commitment would be the Baltics — Estonia, Latvia, and Lithuania — small former Soviet republics that recently became NATO members. We can’t predict if and when a rival like Putin would conclude that America’s alliances seemed weak enough to try testing them. Hopefully, it never happens. But the more Trump attacks the foundations of America’s allies, the more likely things are to change. The absolute risk of a Russian invasion of a NATO state or a North Korean attack on the South is relatively low, but the consequences are so potentially catastrophic — nuclear war! — that it’s worth taking anything that increases the odds of such a conflict seriously. The crack-up of the West? The world order is a little like a game of Jenga. In the game, there are lots of small blocks that interlock to form a stable tower. Each player has to remove a block without toppling the tower. But each time you take out a block, the whole thing gets a bit less stable. Take out enough blocks and it will collapse. The international order works in kind of the same way. There are lots of different interlocking parts — the spread of democracy, American alliances, nuclear deterrence, and the like — that work together to keep the global peace. But take out one block and the other ones might not be strong enough to keep things together on their own. At the end of the Cold War, British and French leaders worried that the passing of the old order might prove destabilizing. In a January 1990 meeting, French President François Mitterrand told British Prime Minister Margaret Thatcher that he feared a united Germany could seize control of even more territory than Hitler. Some experts feared that in the absence of the external Soviet threat, Western European powers might go back to waging war with each other. Thankfully, those predictions turned out to be wrong. There are multiple reasons for that, but one big one — one that also helped keep relations between other historical enemies, like South Korea and Japan, peaceful — is a shared participation in US alliance networks. The US serves as the ultimate security blanket, preventing these countries from having to build up their own armaments and thus risk a replay of World War I. But if American alliance commitments become and remain less credible, it’s possible this order could crack up. America’s partners aren’t stupid. They understand that Trump is the product of deep forces in American politics, and that his victory might not be a one-off. If they think that this won’t be the last “America First” president in modern history, depending on America the way that they have in the past could quickly become a nightmare. The worst-case scenarios for a collapse in the US alliance system are terrible. Imagine full Japanese and German rearmament, alongside rapid-fire proliferation of nuclear weapons. Imagine a crack-up of NATO, with European powers at loggerheads while Russia gobbles up the Baltic states and the rest of Ukraine. Imagine South Korea’s historical tensions with Japan reigniting, and a war between those two countries or any combination of them and China. All of this seems impossible to imagine now, almost absurd. And indeed, in the short run, it is. There is no risk — zero — of American allies turning on each other in the foreseeable future. And it’s possible that the next president after Trump could reassure American allies that nothing like this could ever happen again. But the truth is that there’s just no way to know. When a fundamental force for world peace starts to weaken, no one can really be sure how well the system will hold up. Nothing like this — the leader of the world’s hegemon rounding on its most important allies — has ever happened before. What Donald Trump’s presidency has done, in effect, is start up another geopolitical Jenga game. Slowly but surely, he’s removing the blocks that undergird global security. It’s possible the global order survives Trump — but it’s just too early for us to say for sure. Given the stakes, it’s a game we’d rather not play.

### NATO Add-On – Plan Bolsters NATO

#### Legal interoperability in AI is crucial to future NATO operations.

Zoe Stanley-Lockman, 2022 (Defense and Strategic Studies, Nanyang Technological University, “NATO’s Role in Responsible AI Governance in Military Affairs,” [https://www.oxfordhandbooks.com/view/ 10.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69](https://www.oxfordhandbooks.com/view/%2010.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69), Retrieved 6/11/2022)

One vital and unique contribution for NATO is facilitating legal interoperability among the Allies to resolve some of the most pressing legal barriers for AI implementation in future Allied operations. Legal interoperability, a subset of larger coalition interoperability, refers to the operational coordination around partner legal obligations and interpretations.75 It ensures “that within a military alliance, military operations can be conducted effectively consistent with the legal obligations of each nation.”76 Legal interoperability is a critical component of multilateral operations that has thus far been under-examined, despite its centrality to successful military operations. This is largely because “legal factors have a bearing on everything in alliances and coalition operations—from determining basic ‘troop-to-task’ considerations to decisions regarding the targets to be engaged—and the types of ordinances that may be used.”77

#### Interoperability on AI is key to respond to threats that would undermine NATO.

CENTER FOR EUROPEAN POLICY ANALYSIS, 2/17/2021 (“NATO Leadership on Ethical AI is Key to Future Interoperability,” <https://cepa.org/nato-leadership-on-ethical-ai-is-key-to-future-interoperability/>., Retrieved 6/15/2022)

If individual nations or groups are left to develop their own ethical principles without wider alignment to NATO, the result will be a number of AI-based systems with varying technical specifications based on the legal and policy decisions made by individual governments when answering the key questions. As has been demonstrated in areas such as facial recognition and policing algorithms, the assumptions made by those developing the tools and answering the key questions have a significant impact on the real-world functioning of the tool and societal acceptance of its ethics. The risk of tools failing to gain acceptance depends on the legal and ethical decisions made by governments. For the military, this may mean one state using an AI-based system that is seen as unacceptable by another, and in a joint operation one state fielding a system that cannot be used by another. Or worse yet, this could render a joint operation impossible. Without the ability to interoperate across NATO, the inability to effectively and efficiently respond to future threats would undermine the Alliance.

#### Political oversight of AI operations adds legitimacy and military effectiveness to the alliance.

Zoe Stanley-Lockman, 2022 (Defense and Strategic Studies, Nanyang Technological University, “NATO’s Role in Responsible AI Governance in Military Affairs,” [https://www.oxfordhandbooks.com/view/ 10.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69](https://www.oxfordhandbooks.com/view/%2010.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69), Retrieved 6/11/2022)

The political dimension of the Alliance rests on the bedrock of a shared commitment to the “principles of democracy, individual liberty and the rule of law,” as enshrined in the foundational North Atlantic Treaty of 1949.60 Shared values are important for NATO operations because they help constitute their legitimacy. In addition to the North Atlantic Council exerting civilian oversight over NATO operations, legitimacy also includes respect for international legal principles including the core principles of international humanitarian law, or the laws of armed conflict, distinction, proportionality, and necessity. Without political oversight and legitimacy, NATO’s military power would be less effective at shaping norms and promoting stability in the international system. The introduction of AI means that NATO has the moral and strategic imperative to adopt technologies that confer legitimacy and responsible innovation.61 Acting on a shared commitment to democratic values is vital to the political cohesion of the NATO Alliance, just as much as it is a determinant of military effectiveness in a predictable security environment.

#### AI is key to the speed and effectiveness of US military operations.

DEPARTMENT OF DEFENSE, 2/12/2019 (“SUMMARY OF THE 2018 DEPARTMENT OF DEFENSE ARTIFICIAL INTELLIGENCE STRATEGY,” Retrieved 6/12/2022 from <https://media.defense.gov/2019/Feb/12/2002088963/-1/-1/1/SUMMARY-OF-DOD-AI-STRATEGY.PDF>.)

AI is rapidly changing a wide range of businesses and industries. It is also poised to change the character of the future battlefield and the pace of threats we must face. We will harness the potential of AI to transform all functions of the Department positively, thereby supporting and protecting U.S. servicemembers, safeguarding U.S. citizens, defending allies and partners, and improving the affordability, effectiveness, and speed of our operations. The women and men in the U.S. armed forces remain our enduring source of strength; we will use AI-enabled information, tools, and systems to empower, not replace, those who serve.

### North Korea Add-On – 2AC

#### AI technology can lay the groundwork for nuclear arms control with North Korea.

Jessica Cox, 2021 (Director of Nuclear Policy at NATO, “The Unavoidable Technology: How Artificial Intelligence Can Strengthen Nuclear Stability,” WASHINGTON QUARTERLY)

Similarly, the work of open source intelligence experts, such as the Open Nuclear Network of One Earth Future,38 could be buttressed by applying AI tech¬nology that could recognize and analyze missile activity in North Korea. Arms control with North Korea still seems unlikely as the Kim regime has not expressed an interest in relinquishing its nuclear weapons, but in the meantime, improved information about North Korea’s nuclear activities and plans can improve situa¬tional awareness and understanding of their nuclear program and processes, potentially providing the groundwork for denuclearization and cooperative arms control at a later time. Human involvement would still be essential to provide important contextual information, but these developments might facili¬tate arms control verification by identifying treaty-prohibited items or activities in record time and provide convincing intelligence to the international community.

#### North Korean nuclearization leads to extinction

Peter Hayes, & Michael Hamel-Green, 2009 (Honorary Professor, Center for International Security Studies & professor in social sciences in the College of Arts at Victoria University Melbourne) The Path Not Taken, The Way Still Open: Denuclearizing The Korean Peninsula And Northeast Asia, Dec. 14, 2009. Retrieved Apr. 24, 2016 from http://apjjf.org/-Peter-Hayes/3267/article.html

The consequences of failing to address the proliferation threat posed by the North Korea developments, and related political and economic issues, are serious, not only for the Northeast Asian region but for the whole international community. At worst, there is the possibility of nuclear attack, whether by intention, miscalculation, or merely accident, leading to the resumption of Korean War hostilities. On the Korean Peninsula itself, key population centres are well within short or medium range missiles. The whole of Japan is likely to come within North Korean missile range. Pyongyang has a population of over 2 million, Seoul (close to the North Korean border) 11 million, and Tokyo over 20 million. Even a limited nuclear exchange would result in a holocaust of unprecedented proportions. But the catastrophe within the region would not be the only outcome. New research indicates that even a limited nuclear war in the region would rearrange our global climate far more quickly than global warming. Westberg draws attention to new studies modelling the effects of even a limited nuclear exchange involving approximately 100 Hiroshima-sized 15 kt bombs2 (by comparison it should be noted that the United States currently deploys warheads in the range 100 to 477 kt, that is, individual warheads equivalent in yield to a range of 6 to 32 Hiroshimas).The studies indicate that the soot from the fires produced would lead to a decrease in global temperature by 1.25 degrees Celsius for a period of 6-8 years.3 In Westberg’s view: That is not global winter, but the nuclear darkness will cause a deeper drop in temperature than at any time during the last 1000 years. The temperature over the continents would decrease substantially more than the global average. A decrease in rainfall over the continents would also follow…The period of nuclear darkness will cause much greater decrease in grain production than 5% and it will continue for many years...hundreds of millions of people will die from hunger…To make matters even worse, such amounts of smoke injected into the stratosphere would cause a huge reduction in the Earth’s protective ozone.4 These, of course, are not the only consequences. Reactors might also be targeted, causing further mayhem and downwind radiation effects, superimposed on a smoking, radiating ruin left by nuclear next-use. Millions of refugees would flee the affected regions. The direct impacts, and the follow-on impacts on the global economy via ecological and food insecurity, could make the present global financial crisis pale by comparison. How the great powers, especially the nuclear weapons states respond to such a crisis, and in particular, whether nuclear weapons are used in response to nuclear first-use, could make or break the global non proliferation and disarmament regimes. There could be many unanticipated impacts on regional and global security relationships5, with subsequent nuclear breakout and geopolitical turbulence, including possible loss-of-control over fissile material or warheads in the chaos of nuclear war, and aftermath chain-reaction affects involving other potential proliferant states. The Korean nuclear proliferation issue is not just a regional threat but a global one that warrants priority consideration from the international community.

### North Korea Add-On – Goes Nuclear

#### (--) Risk of war with North Korea is the #1 foreign policy threat—miscalc is a particular scenario—prefer most recent evidence:

Scott A. Snyder, 1/19/2021 (senior fellow for Korea studies and director of the program on U.S.-Korea policy at the Council on Foreign Relations (CFR), where he had served as an adjunct fellow from 2008 to 2011, “Top Conflicts to Watch in 2021: A North Korea Crisis,” <https://www.cfr.org/blog/top-conflicts-watch-2021-north-korea-crisis>, Retrieved 1/27/2021)

As we turn the calendar on 2020 and embark on 2021, the incoming Joe Biden administration faces no shortage of challenges. The priority areas identified by his transition team include overcoming the pandemic, reviving the economy, achieving racial justice, and addressing climate change. Russia, China, and Iran have also been singled out as issues to be addressed. However, the number one concern identified in CFR’s annual Preventive Priorities Survey of foreign policy experts about potential geopolitical risks to worry about in the coming year—namely, a renewed crisis on the Korean Peninsula—has received scant attention in comparison. This is surprising as the issue has hardly gone away—to the contrary, in fact. President Obama warned President-elect Trump in November 2016 that the most vexing international security threat he would face would emanate from North Korea. Two nuclear tests, myriad long-range missile tests, and three Trump-Kim summits later, the magnitude and likelihood of North Korea posing a catastrophic threat to U.S. national interests is greater than it was four years ago. Despite President Trump’s assertions that he averted a war with North Korea by developing a close personal relationship with Kim Jong-un, Trump’s diplomacy appears to have only changed the tone of the relationship while failing to address the underlying problems posed by North Korea’s ability to launch a nuclear strike on the U.S. mainland. It is not clear that Kim’s self-restraint on long-range missile testing will continue. At the Worker’s Party of Korea (WPK) Eighth Party Congress staged only days prior to the Biden administration’s inauguration, Kim characterized the United States as its “foremost principal enemy,” and criticized U.S. perceived “hostile policy” toward North Korea despite North Korea’s “good-will efforts.” Military parades staged in conjunction with the Eighth Party Congress and on the October 10, 2020, 75th anniversary of the WPK revealed that North Korea has strengthened its conventional forces and has developed but not yet tested several new types of missiles capable of delivering a nuclear strike on the United States. While the Trump administration has left the door open to diplomatic negotiations since a one-day meeting with North Korean officials in Stockholm in October 2019, North Korea has refused to come to the negotiating table. Meanwhile, Kim’s 2018 summitry gambit and accompanying economic hopes have turned to distress in the face of ongoing sanctions, North Korea’s COVID quarantine, and flooding from a series of typhoons, putting even greater pressure on Kim to achieve an economic breakthrough. North Korea’s Eighth Party Congress addressed these and other economic challenges while pledging to continue its military development and promising to respond to “force with toughness” and “good faith in kind.” This was as close as Kim came during the eight-day Party Congress to providing a signal of intent to open negotiations with the Biden administration. In addition, many analysts expect North Korea to revert to its traditional playbook by returning to nuclear and missile tests as means by which to test new leaders as Kim has previously done with Obama, Xi Jinping, Park Geun-hye, and Trump. North Korea’s purpose in pursuing provocations would be to push North Korea closer to the top of the Biden administration’s agenda by generating a crisis atmosphere and shaping the space and prospects for diplomatic negotiations. Anticipation of North Korean provocations is so high that analysts have either rushed to recommend that Biden extend an early olive branch to North Korea in an effort to forestall a crisis or speculated about how to capitalize on a crisis to induce North Korea to return to denuclearization negotiations. Regardless of whether Kim Jong-un is motivated by domestic economic distress or the desire to redress long-held international grievances, North Korea’s insistence on presenting itself as an entrenched nuclear weapons state remains at odds with the longstanding U.S. policy and international security norms upheld by the Nuclear Non-Proliferation Treaty. But North Korea’s capabilities are also an undeniable reality and an international security threat that must be managed to avoid catastrophic results. The Biden administration will need to devise a set of early actions to reassure North Korea of its willingness to engage in negotiations, reduce the risk of North Korean miscalculation, and forestall likely attention-grabbing provocations by North Korea, regardless of whether they emanate from manifestations of Kim’s military strength or his economic weakness.

#### (--) Carefully considered diplomacy is necessary to solve the risk of a miscalculated nuclear conflict with North Korea—assumes Trump actions late in his administration:

Louis Rene Beres, 10/21/2020 (Professor Emeritus of Political Science and International Law at Purdue. He is the author of twelve major books and several hundred journal articles in the field. Professor Beres’ writings appear in many leading newspapers and magazines, including The Atlantic, The Hill, U.S. News & World Report, The National Interest, The Jerusalem Post, The New York Times and Oxford University Press. In Israel, where his latest writings were published by the BESA Center for Strategic Studies, the Institute for Policy and Strategy and the Institute for National Security Studies, he was Chair of Project Daniel (PM Sharon, 2003). Dr. Beres’ strategy-centered publications have been published in such places as The Bulletin of the Atomic Scientists; JURIST; Special Warfare (Pentagon); Infinity Journal (Israel); The Strategy Bridge; The War Room (USA War College); Modern War Institute (West Point); The Harvard National Security Journal (Harvard Law School); Modern Diplomacy; Yale Global Online; The International Journal of Intelligence and Counterintelligence, Parameters: Journal of the U.S. Army War College, The Brown Journal of World Affairs, Israel Defense (Tel Aviv); World Politics (Princeton); International Security (Harvard) and the Israel Journal of Foreign Affairs. Professor Louis René Beres was born in Zürich, Switzerland, at the end of World War II, ““Hic Sunt Dracones”: Still Expanding Risks of a US-North Korea Nuclear War,” <https://www.jurist.org/commentary/2020/10/louis-rene-beres-us-north-korea-nuclear-war/>, Retrieved 1/27/2021)

Once again, on October 9, 2020, with immodest displays of tangible hardware, North Korea mocked Donald Trump’s lingering expectations of “denuclearization.” Here, in Pyongyang, President Kim Jong Un smugly revealed a “monster” intercontinental ballistic missile (ICBM). Further highlighted at Kim’s extravagant military parade were the Hwasong-15, which is the longest-range missile ever tested by North Korea, and also what appeared to be a newly-refined submarine-launched ballistic missile (SLBM). How did US President Trump respond? The only apparent reaction from Washington was to call this strategic exposure “disappointing.” Nary a polite nod about the corresponding legal consequences and implications was offered by the White House. None of this should come as any surprise. Massive state-of-the-art nuclear weapons remain North Korea’s most conspicuous expression of global power and influence. To be sure, Kim will never voluntarily surrender such weapons. Realistically, all focused US efforts to deal with this rapidly growing nuclear threat should center on long-term mutual deterrence. Creating this plausibly stabilizing condition by law and diplomacy will be indispensable. For the United States, prudent decision-making in this unstable theatre of potential nuclear conflict will be necessary. Among other things, President Donald J. Trump should take scrupulous care not to exaggerate or overstate America’s military risk-taking calculus. In part, at least, such aptly considered diplomatic caution would stem from the absence of any historically comparable crises. By this absence, prima facie, American military planners and decision-makers remain starkly limited in their capacity to learn from the past. Still, preventing nuclear war with North Korea is not a seat-of-the-pants process for strategic amateurs or political showmen. In the final analysis, the primary battlefield of any war, including nuclear war, must be intellectual. There is more. By definition, there are no “go to” experts on the subject of a nuclear war, civilian or military. As there has never been such a war, there could be no way for American planners or decision-makers to ascertain the mathematical probability of a US-North Korea nuclear conflict. It follows, inter alia, that there exist ample grounds for US decisional modesty. For the United States, it is high time to display profound humility on all strategic and law-based dealings with Kim Jong Un. When a prospectively belligerent path has never been walked upon before, it is incumbent on the calculating “traveler” to advance slowly, purposefully and with recognizable deliberateness. In essence, all strategic issues are many-sided matters of science, law and logic, not just wishful thinking or faith. Though Trump’s original reference to the June 12, 2018 Singapore Summit was to an occasion where the two leaders “fell in love,” there remain few if any residual benefits to this earlier “romance.” This does not mean that Trump’s senior strategists and counselors should in any fashion steer away consciously from clear-eyed assessments of nuclear costs and risks, but only that such assessments be drawn from a constantly shifting and hard to decipher geopolitics. In terms of international law, this geopolitics remains much like its original form in the seventeenth century; that is, anarchic, force-based and unmitigated by any well-intentioned global authority. There is more. It goes without saying that the “pandemic variable” could sometime prove decisive in strategic terms. Unalterably, calculating plausible connections between this novel biological variable and US national security would represent an unprecedented task of Herculean proportion. President Trump will also have to bear in mind that many continuously transforming and mutating strategic developments throughout Asia will be impacted by “Cold War II.” This “War” references an ongoing and primary oppositional stance with Russia, and – more or less derivatively – with China. How shall the United States plan? Proceeding with assorted time-urgent considerations of US – North Korea policy, all significant US strategic calculations will be fraught with intersecting, overlapping and daunting uncertainties. Always, it will be necessary for President Trump and his relevant counselors to remain ready to offer the best available war-peace estimations. Among potential causal factors – some of them maximally interdependent or authentically “synergistic” – the calculable risks of a nuclear war between Washington and Pyongyang (or between Pyongyang and South Korea) will depend upon whether such a fearful conflict would be intentional, unintentional or accidental. Ipso facto, this three-fold distinction would also have pertinent jurisprudential differences. Whatever the particular cause, useful calculations will have to include presumed North Korean conflict orientations to certain regional American allies, not just to the US directly. Such inclusion, in turn, will have to factor in China. As always, in these calculations, refined strategic theory will be a necessary “net.” Only those who “cast,” can be expected to “catch.” This tripartite distinction on cause could prove important to any hoped for success in US-North Korea nuclear war prediction and prevention. Any accidental nuclear war between the US and North Korea would be unintentional or inadvertent, but not all unintentional nuclear wars would be the result of an accident. An unintentional nuclear war could sometime be the result of decisional miscalculation or irrationality, by either one or both of the two contending parties/presidents. Such an understanding is entirely plausible, and ought to underscore the need for decision-maker humility rather than flagrantly chauvinistic bravado. There is much more to know. Facing future North Korean negotiations – proceedings governed by authoritative international law – it will be necessary that competent US policy analysts systematically examine dynamic configurations of foreseeable nuclear risk. When expressed in the orthodox game-theoretic parlance of formal military planning, these shifting configurations could present themselves singly or one-at-a-time (the expectedly best case for Washington); but, they might also arise more-or-less suddenly, unexpectedly, with an apparent diffusiveness and in multiple or overlapping “cascades” of strategic complexity. Whatever their nuances, these examinations will be intellectual and legal tasks, not political ones. To understand any such “cascades” will require carefully-honed, well-developed and formidable analytic skills. Correspondingly, this will not be a graspable task for the analytically faint-hearted. It will require generally rare combinations of historical acquaintance, legal erudition and well- demonstrated capacities for advanced dialectical thinking. In essence, this points to a task that will require thinkers who are as comfortable with elucidating holistic computation prescriptions of Plato and Descartes as with more narrowly technical elements of modern strategic planning. Certain understandings here will call for crucial bifurcations. Currently, it is worrisome that neither Washington nor Pyongyang is likely paying sufficient attention to the specific risks of an unintentional nuclear war. Moreover, to this point in their ongoing relations, each President would seem to assume the other’s decision-making rationality. If, after all, there were no such mutual assumption, it would make no calculable sense for either side to negotiate any further nuclear security accommodations with the other. Goals here must be plain. Stable and viable deterrence, not Pyongyang’s “denuclearization,” must become the overriding US strategic goal vis-à-vis North Korea. This complex goal is always contingent upon certain basic assumptions concerning enemy rationality. But are such assumptions valid in the particular case of a potential war between two nuclear powers? If not, if President Donald Trump should sometime begin to fear overt enemy irrationality in Pyongyang, issuing any explicit threats of US retaliation might only make matters less stable. This is especially worrisome where the new threats were expressly disproportionate. In the past, in his escalating bravado detached from any secure intellectual foundations, Donald Trump has favored such utterly vacant and law-violating threats as “complete annihilation” or “total destruction.” No such crudely lawless preference stands even a scintilla of chance to meet legitimate American security goals. What might sound reasonably “tough” to an American President comfortable only with metaphors of the street may nonetheless only reduce US nuclear deterrent persuasiveness. At some point, if made too contingent upon seat-of-the-pants bellicosity, American national security could come to depend on some presumptively viable combinations of ballistic missile defense and defensive first strikes. Settling upon such untested and legally-problematic combinations would lack decisional input from any tangible/quantifiable historical evidence, and would be existentially risky. In the conceivably worst case, the offensive military element could entail a narrowly situational preemption – a defensive first strike. At that manifestly late stage, of course, all previous hopes for bilateral reconciliation would already have become moot. At that portentous point, there could remain no “ordinary” circumstances wherein a preemptive strike against a nuclear North Korea would still be rational. In Washington’s nuclear relations with Pyongyang, none of these decisions should ever be made casually or without fully substantive intellectual foundations. More precisely, with the steadily expanding development of “hypersonic” nuclear weapons, determining optimal US policy combinations from one crisis to another could very quickly become overwhelming. Though counterintuitive, the fact that the United States is recognizably “more powerful” than North Korea could prove to be largely irrelevant. Even worse, it could become the underlying cause of some actual military nuclear engagement between the two countries. Some years back, Donald Trump, speaking of Kim Jong Un, bragged that both leaders may have a nuclear “button,” but that “my button is bigger than his.” In such urgent matters of national strategy, however, size would likely not matter. In matters of strategic nuclear deterrence, even a seemingly “weaker” nuclear force could still inflict wholly unacceptable harms. In these delicate matters, the weaker party could remain fully capable of wreaking “assuredly destructive” retaliations. In all such foreseeable circumstances, there would obtain various overlapping issues of law and strategy. Under international law, which remains an integral part of US law, the option of a selective or comprehensive defensive first-strike might sometime be correctly characterized as “anticipatory self-defense.” This juridical correctness would apply, however, only if the American side could argue persuasively that the “danger posed” by North Korea was “imminent in point of time.” Discernible “imminence” is specifically required by the authoritative standards of international law – that is, by criteria established and codified after an 1837 naval incident famously called “The Caroline.” Today, in the perplexing nuclear age, aptly precise characterizations of “imminence” could also prove sorely abstract or densely problematic. What then? For the time being, at least, it seems plausible that Kim Jong Un would value his own personal life and that of his nation above any other conceivable preference or combination of preferences. In any corresponding scenario, Kim is assumed to be technically rational, and thus remains subject to US nuclear deterrence. Nonetheless, it could still become important for any negotiating American president to distinguish accurately between authentic instances of enemy irrationality and instances of feigned or pretended irrationality. Such an expectation might not be easily satisfied in the midst of any already-ongoing nuclear crisis; that is, in extremis atomicum. As for the potential effects of disease pandemic upon accurate adversarial assessments, these would inevitably be significant. They could also be more-or-less indecipherable. There is more. Although neither side would likely seek a shooting war, especially if both adversaries were fully rational, either or both heads of state could still commit catastrophic errors in making strategic choices. Any such errors would likely represent an unintended consequence of jointly competitive searches for “escalation dominance.” Arguably, these sorts of prospectively crucial errors are more apt to occur in circumstances where one or both presidents had chosen to reignite exclamations of gratuitous bravado or belligerent rhetoric. An inadvertent nuclear war between Washington and Pyongyang could take place not only as the result of certain misunderstandings or miscalculations between rational national leaders, but also as the unintended consequence (singly or synergistic) of mechanical, electrical, computer malfunctions, or certain “hacking”-type interventions. Going forward, these interventions could surely include unprecedented intrusions of “cyber-mercenaries.” What are the essential “nuclear bargaining” dynamics that now need to be studied? In any crisis between Washington and Pyongyang, each side will expectedly strive to maximize two overriding goals at the same time. These objectives are (1) to dominate the dynamic and largely unpredictable process of nuclear crisis escalation; and (2) to achieve desired “escalation dominance” without sacrificing vital national security obligations. In the final analysis, this second objective means preventing one’s own state and society from suffering catastrophic or existential harms. What is the “bottom line”? All underlying issues of strategic contention between Washington and Pyongyang are enormously complicated and (as an inevitable corollary) subject to irremediable failure. Faced with such complexities – both operational and legal – each side must now proceed warily, in suitably deliberate fashion, with a posture that is both militarily purposeful and prudentially risk-averse. Reciprocally, any aggressive over-confidence by President Trump and/or President Kim will have to be consciously avoided. Recalling the terrible costs of excessive leadership pride chronicled in Greek tragedy – that is, existential costs of “hubris” – the American President must also understand that there will be no rescues from any Deus ex machina. In the end, these must all be matters of problematic human judgment. Although everything on the bargaining table could appear simple, it would be wise to keep in mind the classic “friction-centered” warning of Carl von Clausewitz. “Everything is very simple in war,” says the Prussian military thinker in On War, “but even the simplest thing is very difficult.” Always, this difficulty must extend to corresponding matters of law.

### Pandemics Add-On – 2AC

#### AI solves pandemics.

Ania Syrowatka, et al, 6/10/2021 (Division of General Internal Medicine, Brigham and Women’s Hospital, Boston, MA, USA, “Leveraging artificial intelligence for pandemic preparedness and response: a scoping review to identify key use cases,” Retrieved 6/12/2022 from https://www.nature.com/articles/s41746-021-00459-8)

Artificial intelligence (AI) represents a valuable tool that could be widely used to inform clinical and public health decision-making to effectively manage the impacts of a pandemic. The objective of this scoping review was to identify the key use cases for involving AI for pandemic preparedness and response from the peer-reviewed, preprint, and grey literature. The data synthesis had two parts: an in-depth review of studies that leveraged machine learning (ML) techniques and a limited review of studies that applied traditional modeling approaches. ML applications from the in-depth review were categorized into use cases related to public health and clinical practice, and narratively synthesized. One hundred eighty-three articles met the inclusion criteria for the in-depth review. Six key use cases were identified: forecasting infectious disease dynamics and effects of interventions; surveillance and outbreak detection; real-time monitoring of adherence to public health recommendations; real-time detection of influenza-like illness; triage and timely diagnosis of infections; and prognosis of illness and response to treatment. Data sources and types of ML that were useful varied by use case. The search identified 1167 articles that reported on traditional modeling approaches, which highlighted additional areas where ML could be leveraged for improving the accuracy of estimations or projections. Important ML-based solutions have been developed in response to pandemics, and particularly for COVID-19 but few were optimized for practical application early in the pandemic. These findings can support policymakers, clinicians, and other stakeholders in prioritizing research and development to support operationalization of AI for future pandemics.

#### New pandemics threaten human extinction:

Lakshmi Supriya, PhD., 4/19/2021 (Lakshmi Supriya got her BSc in Industrial Chemistry from IIT Kharagpur (India) and a Ph.D. in Polymer Science and Engineering from Virginia Tech (USA)., “Humans versus viruses - Can we avoid extinction in near future?”, <https://www.news-medical.net/news/20210419/Humans-versus-viruses-Can-we-avoid-extinction-in-near-future.aspx>, Retrieved 8/2/2021)

Expert argues that human-caused changes to the environment can lead to the emergence of pathogens, not only from outside but also from our own microbiome, which can pave the way for large-scale destruction of humans and even our extinction. Whenever there is a change in any system, it will cause other changes to reach a balance or equilibrium, generally at a point different from the original balance. Although this principle was originally posited by the French chemist Henry Le Chatelier for chemical reactions, this theory can be applied to almost anything else. In an essay published on the online server Preprints\*, Eleftherios P. Diamandis of the University of Toronto and the Mount Sinai Hospital, Toronto, argues that changes caused by humans, to the climate, and everything around us will lead to changes that may have a dramatic impact on human life. Because our ecosystems are so complex, we don’t know how our actions will affect us in the long run, so humans generally disregard them. Changing our environment Everything around us is changing, from living organisms to the climate, water, and soil. Some estimates say about half the organisms that existed 50 years ago have already become extinct, and about 80% of the species may become extinct in the future. As the debate on global warming continues, according to data, the last six years have been the warmest on record. Global warming is melting ice, and sea levels have been increasing. The changing climate is causing more and more wildfires, which are leading to other related damage. At the same time, increased flooding is causing large-scale devastation. One question that arises is how much environmental damage have humans already done? A recent study compared the natural biomass on Earth to the mass produced by humans and found humans produce a mass equal to their weight every week. This human-made mass is mainly for buildings, roads, and plastic products. In the early 1900s, human-made mass was about 3% of the global biomass. Today both are about equal. Projections say by 2040, the human-made mass will be triple that of Earth’s biomass. But, slowing down human activity that causes such production may be difficult, given it is considered part of our growth as a civilization. Emerging pathogens Although we are made up of human cells, we have almost ten times that of bacteria just in our guts and more on our skin. These microbes not only affect locally but also affect the entire body. There is a balance between the good and bad bacteria, and any change in the environment may cause this balance to shift, especially on the skin, the consequences of which are unknown. Although most bacteria on and inside of us are harmless, gut bacteria can also have viruses. If viruses don’t kill the bacteria immediately, they can incorporate into the bacterial genome and stay latent for a long time until reactivation by environmental factors, when they can become pathogenic. They can also escape from the gut and enter other organs or the bloodstream. Bacteria can then use these viruses to kill other bacteria or help them evolve to more virulent strains. An example of the evolution of pathogens is the cause of the current pandemic, the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Several mutations are now known that make the virus more infectious and resistant to immune responses, and strengthening its to enter cells via surface receptors. The brain There is evidence that the SARS-CoV-2 can also affect the brain. The virus may enter the brain via the olfactory tract or through the angiotensin-converting enzyme 2 (ACE2) pathway. Viruses can also affect our senses, such as a loss of smell and taste, and there could be other so far unkown neurological effects. The loss of smell seen in COVID-19 could be a new viral syndrome specific to this disease. Many books and movies have described pandemics caused by pathogens that wipe out large populations and cause severe diseases. In the essay, the author provides a hypothetical scenario where a gut bacteria suddenly starts producing viral proteins. Some virions spread through the body and get transmitted through the human population. After a few months, the virus started causing blindness, and within a year, large populations lost their vision. Pandemics can cause other diseases that can threaten humanity’s entire existence. The COVID-19 pandemic brought this possibility to the forefront. If we continue disturbing the equilibrium between us and the environment, we don’t know what the consequences may be and the next pandemic could lead us to extinction.

# Offcase Answers

## AT: Rogue AI DA

### Rogue AI DA – 2AC

#### Tech is inevitable—it’s just a matter of whether the US or China gets the tech.

#### NATO coordination on joint operations with AI can promote coordination on the ethical guidelines for the development of AI.

Zoe Stanley-Lockman, 2022 (Defense and Strategic Studies, Nanyang Technological University, “NATO’s Role in Responsible AI Governance in Military Affairs,” [https://www.oxfordhandbooks.com/view/ 10.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69](https://www.oxfordhandbooks.com/view/%2010.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69), Retrieved 6/11/2022)

NATO’s influence in the functioning of joint operations and multinational military operations situates the Alliance to coordinate between how Allies implement ethical principles in their own national AI development. Specifically, NATO is well-situated to advocate for transparency, accountability, and data governance, which are also adoption factors that can translate into operational benefits, among other values.69 For example, these factors can promote coordination among Allies on ethical guidelines on the development and use of AI, as this will be a necessary foundation in any future joint operation that uses this technology. “The transatlantic partnership must focus on coordinating these core principles and systematic governance to ensure AI systems development aligns with the rule of law and democracy. In particular, this must ensure answering questions about human dignity, human control, and accountability … NATO remains the organization that can bring these two (U.S. and EU) together and establishes the ethical bottom line.”70 The issues of transparency and accountability will define the scope of future implementation.

#### NATO is vital to effectively managing AI technology—multilateral approaches and cohesion are necessary to solve.

Zoe Stanley-Lockman, 2022 (Defense and Strategic Studies, Nanyang Technological University, “NATO’s Role in Responsible AI Governance in Military Affairs,” [https://www.oxfordhandbooks.com/view/ 10.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69](https://www.oxfordhandbooks.com/view/%2010.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69), Retrieved 6/11/2022)

NATO structures around strategic and policy planning both set Allied ambitions and priorities and have the competency to implement them through its many consultative bodies, coordination formats, and albeit to a lesser extent, technology foresight capacities. NATO has facilitative power among Allies, both for defense planning and for the conduct of operations. A cornerstone in modern architecture of international security is coalition warfare—or, more broadly, joint operations. Working with military partners has become a critical feature of modern security policy, where there is more power in enhancing numbers, but also in having allies that lend political and practical legitimacy to deterrence and operations.49 NATO is vital to that effort for many reasons, but also because NATO’s facilitative power is significant to promote coordination and cooperation. Simply put, partners and allies are a necessary feature of modern military behavior, and strategic and policy planning are necessary functions to encourage and underpin cohesion in alliance settings. This is important for AI governance because the nature of AI poses new strategic challenges and will require multilateral approaches and some degree of cohesion to effectively incorporate RRI frameworks in policy planning. As such, the necessity of working with security partners extends to the AI-policy frontier.

#### Technological limits prevent AI from being an existential threat to humanity.

Edward Moore Geist, 8/9/2015 (MacArthur Nuclear Security Fellow at Stanford University's Center for International Security and Cooperation, “Is artificial intelligence really an existential threat to humanity?” <https://thebulletin.org/2015/08/is-artificial-intelligence-really-an-existential-threat-to-humanity/>, Retrieved 6/15/2022)

Superintelligence: Paths, Dangers, Strategies is an astonishing book with an alarming thesis: Intelligent machines are “quite possibly the most important and most daunting challenge humanity has ever faced.” In it, Oxford University philosopher Nick Bostrom, who has built his reputation on the study of “existential risk,” argues forcefully that artificial intelligence might be the most apocalyptic technology of all. With intellectual powers beyond human comprehension, he prognosticates, self-improving artificial intelligences could effortlessly enslave or destroy Homo sapiens if they so wished. While he expresses skepticism that such machines can be controlled, Bostrom claims that if we program the right “human-friendly” values into them, they will continue to uphold these virtues, no matter how powerful the machines become. These views have found an eager audience. In August 2014, PayPal cofounder and electric car magnate Elon Musk tweeted “Worth reading Superintelligence by Bostrom. We need to be super careful with AI. Potentially more dangerous than nukes.” Bill Gates declared, “I agree with Elon Musk and some others on this and don’t understand why some people are not concerned.” More ominously, legendary astrophysicist Stephen Hawking concurred: “I think the development of full artificial intelligence could spell the end of the human race.” Proving his concern went beyond mere rhetoric, Musk donated $10 million to the Future of Life Institute “to support research aimed at keeping AI beneficial for humanity.” Superintelligence is propounding a solution that will not work to a problem that probably does not exist, but Bostrom and Musk are right that now is the time to take the ethical and policy implications of artificial intelligence seriously. The extraordinary claim that machines can become so intelligent as to gain demonic powers requires extraordinary evidence, particularly since artificial intelligence (AI) researchers have struggled to create machines that show much evidence of intelligence at all. While these investigators’ ultimate goals have varied since the emergence of the discipline in the mid-1950s, the fundamental aim of AI has always been to create machines that demonstrate intelligent behavior, whether to better understand human cognition or to solve practical problems. Some AI researchers even tried to create the self-improving reasoning machines Bostrom fears. Through decades of bitter experience, however, they learned not only that creating intelligence is more difficult than they initially expected, but also that it grows increasingly harder the smarter one tries to become. Bostrom’s concept of “superintelligence,” which he defines as “any intellect that greatly exceeds the cognitive performance of humans in virtually all domains of interest,” builds upon similar discredited assumptions about the nature of thought that the pioneers of AI held decades ago. A summary of Bostrom’s arguments, contextualized in the history of artificial intelligence, demonstrates how this is so. In the 1950s, the founders of the field of artificial intelligence assumed that the discovery of a few fundamental insights would make machines smarter than people within a few decades. By the 1980s, however, they discovered fundamental limitations that show that there will always be diminishing returns to additional processing power and data. Although these technical hurdles pose no barrier to the creation of human-level AI, they will likely forestall the sudden emergence of an unstoppable “superintelligence.” The risks of self-improving intelligent machines are grossly exaggerated and ought not serve as a distraction from the existential risks we already face, especially given that the limited AI technology we already have is poised to make threats like those posed by nuclear weapons even more pressing than they currently are. Disturbingly, little or no technical progress beyond that demonstrated by self-driving cars is necessary for artificial intelligence to have potentially devastating, cascading economic, strategic, and political effects. While policymakers ought not lose sleep over the technically implausible menace of “superintelligence,” they have every reason to be worried about emerging AI applications such as the Defense Advanced Research Projects Agency’s submarine-hunting drones, which threaten to upend longstanding geostrategic assumptions in the near future. Unfortunately, Superintelligence offers little insight into how to confront these pressing challenges.

#### Case turns disad: Nuclear war would lead to the annihilation of all life on Earth.

António Guterres, 1/2/2022 (Secretary-General of the United Nations, “Threat of nuclear war: Not a thing of the past,” <https://www.thedailystar.net/views/opinion/news/threat-nuclear-war-not-thing-the-past-2930251>, Retrieved 6/15/2022)

We live in worrying times. The climate crisis, stark inequalities, bloody conflicts and human rights abuses, and the personal and economic devastation caused by the Covid-19 pandemic have put our world under greater stress than it has faced in my lifetime. But the existential threat that cast a shadow over the first half of my life no longer receives the attention it should. Nuclear weapons have faded from headlines and Hollywood scripts. But the danger they pose remains as high as ever, and is growing by the year. Nuclear annihilation is just one misunderstanding or miscalculation away—a sword of Damocles that threatens not only suffering and death on a horrific scale, but the end of all life on earth.

### Rogue AI DA – Link Turn – 1AR

#### Greater transatlantic cooperation on AI is necessary to prevent the advancement of harmful AI.

Christie Lawrence & Sean Cordey, 2020, (Belfer Center for Science and International Affairs, Harvard Kennedy School, “The Case for Increased Transatlantic Cooperation on Artificial Intelligence,” <https://www.belfercenter.org/publication/case-increased-transatlantic-cooperation-artificial-intelligence>, Retrieved 6/12/2022)

Despite all of these changes, the importance of a strong relationship between the United States and the European Union has been a constant. The transatlantic disagreements that have characterized the past few years—and have hampered a united front on emerging technologies like 5G and AI5—are not the first time US-EU relations have suffered, but they should not further divide allies that share common values.6 Deepened US-EU cooperation across the entire AI ecosystem7 is necessary to advance a more secure, safe, and prosperous world, but to do this the current level of AI-related coordination and partnership needs to be increased. This report’s purpose is twofold: first, to inform policymakers and researchers about the current state of transatlantic AI efforts; and second, to recommend specific areas where transatlantic AI collaboration should be strengthened. Based on a comprehensive study of over 260 documents and reports covering the period from December 1997 to June 2020, we proposes more than 16 recommendations to increase US-EU AI collaboration across the entire AI ecosystem, as well as 9 recommendations for AI cooperation in the healthcare, environmental sciences, and defense sectors. Greater transatlantic efforts are needed to prevent the advancement of an AI vision that is adversarial and harmful to the wellbeing of the United States, the European Union, and allies.

#### NATO can lead the establishment of responsible technological development in AI to steward military development on a responsible trajectory.

Zoe Stanley-Lockman, 2022 (Defense and Strategic Studies, Nanyang Technological University, “NATO’s Role in Responsible AI Governance in Military Affairs,” [https://www.oxfordhandbooks.com/view/ 10.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69](https://www.oxfordhandbooks.com/view/%2010.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69), Retrieved 6/11/2022)

This chapter explores a role for the North Atlantic Treaty Organization (NATO) in the emerging military artificial intelligence (AI) governance architecture. As global powers compete for capabilities that AI can offer, NATO has the challenging task of recalibrating strategic relationships in the coming years. NATO has begun to recognize technological change as a necessary variable and, in turn, adapt its organizational composition and strategy to increase the Alliance’s capacity to meet emerging security challenges. As NATO bodies and Allies prepare for the impact of AI on future military operations, NATO has its own responsibility to steward AI in ways that promote harmonization among Allies and advance the NATO mission. Toward this effort, the chapter highlights two governance mechanisms within NATO’s competency—strategic and policy planning, and standards and certification—as practices that exemplify NATO’s power to shape the trajectory of technological development. We operationalize these governance tools by examining the three pillars that are particularly challenging for AI governance: ethics and values, legal norms, and safety and security. Within each pillar, we examine NATO’s facilitation of strategic policy planning and standards and certification to emerge as a leader in establishing responsible technological development and, ultimately, a more secure international security environment. This chapter finds there is space for NATO to pursue its agenda to maintain technological superiority not just to protect and defend its way of life, but to build on AI governance pillars to steward military innovation on a responsible trajectory.

### Rogue AI DA – No War – 1AR

#### Claims that AI will cause World War III are overstated rhetoric.

Michael Horowitz, Dec. 2019, (Political Science Prof @ University of Pennsylvania, “A Stable Nuclear Future? The Impact of Autonomous Systems and Artificial Intelligence,” Retrieved Apr. 28, 2022 from <https://arxiv.org/abs/1912.05291>)

In early 2017, Klaus Schwab of the World Economic Forum argued that the world is on the cusp of a Fourth Industrial Revolution, wherein several technologies – but most prominently AI – could reshape global affairs.5 Many defense experts around the world share Schwab’s recognition of the potentially transformative effects of AI.6 The most prominent statements about the impact of AI on warfare, however, tend to be extreme. Elon Musk, for instance, has vocally contended that AI run amok could risk World War III.7 This overheated rhetoric masks the way that advances in automation, autonomous systems, and AI may actually influence warfare, especially in the vital areas of nuclear deterrence and warfighting. The intersection of nuclear stability and artificial intelligence thus raises critical issues for the study of international politics.

### Rogue AI DA – No Extinction – 1AR

#### Doomsday AI scenarios won’t happen—multiple reasons.

Michael Shermer, 3/1/2017 (Presidential Fellow at Chapman University, “Artificial Intelligence Is Not a Threat—Yet,” <https://www.scientificamerican.com/article/artificial-intelligence-is-not-a-threat-mdash-yet/>, Retrieved 6/15/2022)

I'm skeptical. First, all such doomsday scenarios involve a long sequence of if-then contingencies, a failure of which at any point would negate the apocalypse. University of West England Bristol professor of electrical engineering Alan Winfield put it this way in a 2014 article: “If we succeed in building human equivalent AI and if that AI acquires a full understanding of how it works, and if it then succeeds in improving itself to produce super-intelligent AI, and if that super-AI, accidentally or maliciously, starts to consume resources, and if we fail to pull the plug, then, yes, we may well have a problem. The risk, while not impossible, is improbable.” Second, the development of AI has been much slower than predicted, allowing time to build in checks at each stage. As Google executive chairman Eric Schmidt said in response to Musk and Hawking: “Don't you think humans would notice this happening? And don't you think humans would then go about turning these computers off?” Google's own DeepMind has developed the concept of an AI off switch, playfully described as a “big red button” to be pushed in the event of an attempted AI takeover. As Baidu vice president Andrew Ng put it (in a jab at Musk), it would be “like worrying about overpopulation on Mars when we have not even set foot on the planet yet.” Third, AI doomsday scenarios are often predicated on a false analogy between natural intelligence and artificial intelligence. As Harvard University experimental psychologist Steven Pinker elucidated in his answer to the 2015 Edge.org Annual Question “What Do You Think about Machines That Think?”: “AI dystopias project a parochial alpha-male psychology onto the concept of intelligence. They assume that superhumanly intelligent robots would develop goals like deposing their masters or taking over the world.” It is equally possible, Pinker suggests, that “artificial intelligence will naturally develop along female lines: fully capable of solving problems, but with no desire to annihilate innocents or dominate the civilization.” Fourth, the implication that computers will “want” to do something (like convert the world into paperclips) means AI has emotions, but as science writer Michael Chorost notes, “the minute an A.I. wants anything, it will live in a universe with rewards and punishments—including punishments from us for behaving badly.” Given the zero percent historical success rate of apocalyptic predictions, coupled with the incrementally gradual development of AI over the decades, we have plenty of time to build in fail-safe systems to prevent any such AI apocalypse.

#### Superintelligence is a practical impossibility.

Edward Moore Geist, 8/9/2015 (MacArthur Nuclear Security Fellow at Stanford University's Center for International Security and Cooperation, “Is artificial intelligence really an existential threat to humanity?” <https://thebulletin.org/2015/08/is-artificial-intelligence-really-an-existential-threat-to-humanity/>, Retrieved 6/15/2022)

Convinced that sufficient “intelligence” can overcome almost any obstacle, Bostrom acknowledges few limits on what artificial intelligences might accomplish. Engineering realities rarely enter into Bostrom’s analysis, and those that do contradict the thrust of his argument. He admits that the theoretically optimal intelligence, a “perfect Bayesian agent that makes probabilistically optimal use of available information,” will forever remain “unattainable because it is too computationally demanding to be implemented in any physical computer.” Yet Bostrom’s postulated “superintelligences” seem uncomfortably close to this ideal. The author offers few hints of how machine superintelligences would circumvent the computational barriers that render the perfect Bayesian agent impossible, other than promises that the advantages of artificial components relative to human brains will somehow save the day. But over the course of 60 years of attempts to create thinking machines, AI researchers have come to the realization that there is far more to intelligence than simply deploying a faster mechanical alternative to neurons. In fact, the history of artificial intelligence suggests that Bostrom’s “superintelligence” is a practical impossibility.

## A2: Other DAs

### Readiness DA/Ethics Bad DA – 2AC

#### Incorporating ethics into AI will bolster US capabilities to create effective AI.

Benjamin Boudreaux, 1/11/2019 (professor at the Pardee RAND Graduate School, “Does the U.S. Face an AI Ethics Gap?” [https://www.realcleardefense.com/articles/2019/01/11/ does\_the\_us\_face\_an\_ai\_ethics\_gap\_114095.html](https://www.realcleardefense.com/articles/2019/01/11/%20does_the_us_face_an_ai_ethics_gap_114095.html), Retrieved 6/12/2022)

Even with differences in how ethical risks are interpreted between the U.S. and its adversaries, this is not a gap that will debilitate the U.S. but could instead be a source of U.S. strength. Ethical conduct by the DoD is essential to bolster domestic popular support and the legitimacy of military action. This is especially important in the context of open source access to details about military operations that previously would have been opaque to most Americans. Further, an emphasis on ethical action could also help the military build partnerships with the private sector to leverage the most advanced technologies, attract AI talent, and promote multinational alliances with like-minded countries in Europe and elsewhere. So ethical considerations could become a fundamental component of how the U.S. builds the partnerships and capabilities essential for both its hard and soft power. But in addition to these pragmatic reasons to care about ethics, the U.S. should also recognize that the ethical risks raised about AI reflect real humanitarian values that matter deeply. Instead of worrying about an ethics gap, U.S. policymakers and the military community could proudly demonstrate a commitment to leading in AI ethics, and build standards of responsible AI behavior reflecting American values that can rally the international community. Indeed, U.S. leadership on AI ethics could be essential to ensuring that risks are mitigated and the AI arms race does not become a race to the bottom.

#### Infusing ethical principles into AI do not detract from military readiness.

Zoe Stanley-Lockman, 2022 (Defense and Strategic Studies, Nanyang Technological University, “NATO’s Role in Responsible AI Governance in Military Affairs,” [https://www.oxfordhandbooks.com/view/ 10.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69](https://www.oxfordhandbooks.com/view/%2010.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69), Retrieved 6/11/2022)

Additionally, infusing AI development with certain ethical principles and values can have operational advantages and benefits, and NATO can, in particular, promote the ethical principles as operational standards for the Allies. A common critique within the ethics debate is that approaching new technology with an ethical or democratic values-driven perspective translates into comparative military disadvantage. Essentially, if your adversary develops technology without the constraints of ethical principles then there will be diminished effectiveness on the battlefield.56 We find this critique unfounded because it assumes there is a false trade-off between ethics and effectiveness; instead, we argue ethical foundations are built into the architecture of modern warfare.57 As such, ethics is a background condition for battlefield effectiveness, which is already infused in military decision-making and helping to guide the boundaries of international humanitarian law. As such, ethical guidelines do not have to detract from a military’s capacity or competency to devise means and methods of warfare that will serve their national or coalition interest.58 If anything, a first-mover advantage can incentivize an ethical and values-driven AI to establish the threshold of technological standards globally.59

#### Developing safe and secure AI is necessary for NATO to maintain AI technological superiority.

Zoe Stanley-Lockman, 2022 (Defense and Strategic Studies, Nanyang Technological University, “NATO’s Role in Responsible AI Governance in Military Affairs,” [https://www.oxfordhandbooks.com/view/ 10.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69](https://www.oxfordhandbooks.com/view/%2010.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69), Retrieved 6/11/2022)

In any discussion of AI as an emerging military technology, it is necessary to strike a balance between acknowledging the transformative potential of AI in the security environment, while simultaneously recognizing the “hype” that may, thus far, be unfounded. But some conclusions are clear. The risks and opportunities of military AI can pose significant challenges for future military operations, and this necessarily means there are many stakeholders with a vested interest in developing, promoting, and implementing responsible military AI. As multinational coalitions and military operations are a foundational security policy for much of the world, this means NATO is also a stakeholder with a vital interest in promoting safe and secure technology among its partners, both traditional and non-traditional. As the international security environment continues to shift, there is space for NATO to pursue its agenda to maintain technological superiority not just to protect and defend its way of life, but also to build on its pillars of AI governance to steward military innovation on a responsible trajectory.

#### AI is key to US readiness.

#### DEPARTMENT OF DEFENSE, 2/12/2019 (“SUMMARY OF THE 2018 DEPARTMENT OF DEFENSE ARTIFICIAL INTELLIGENCE STRATEGY,” Retrieved 6/12/2022 from <https://media.defense.gov/2019/Feb/12/2002088963/-1/-1/1/SUMMARY-OF-DOD-AI-STRATEGY.PDF>.)

The Strategy directs that we will use AI in a human-centered manner to: Support and protect U.S. servicemembers and civilians around the world. We will incorporate AI into decision-making and operations to reduce risk to fielded forces and generate military advantage. AI can help us better maintain our equipment, reduce operational costs, and improve readiness. Incorporating AI also has the potential to enhance our implementation of the Law of War. By improving the accuracy of military assessments and enhancing mission precision, AI can reduce the risk of civilian casualties and other collateral damage.

### Politics – Plan Popular – 2AC

#### There is growing political support for transatlantic cooperation on AI with NATO.

Christie Lawrence & Sean Cordey, 2020, (Belfer Center for Science and International Affairs, Harvard Kennedy School, “The Case for Increased Transatlantic Cooperation on Artificial Intelligence,” <https://www.belfercenter.org/publication/case-increased-transatlantic-cooperation-artificial-intelligence>, Retrieved 6/12/2022)

Transatlantic Cooperation: Despite over 40 years of scientific relationships and projects between the United States and the European Union, AI-specific collaboration has been fraught with varying degrees of political and academic skepticism on both side of the Atlantic, notably within the European Commission and the governments of some Member States (e.g., France and Germany).31 Such a dynamic is aggravated, in part, by the ever-deteriorating transatlantic relationship spurred by policy and trade disagreements, public spats, and increasing American isolationism. Despite such explicit omissions and stand-offs at the highest levels, transatlantic collaboration for AI does happen, most notably in various multilateral forums working on standards (e.g., ISO, IEC, IEEE, G7, G20) or on ethics and norms (e.g., OECD, GPAI32).33 In recent months, however, interests and political support for greater transatlantic coordination on AI seems to be increasing. This trend was notably demonstrated by a visit from Lt. Gen. Jack Shanahan—then Director of the US Department of Defense’s Joint Artificial Intelligence Center (JAIC)—to Brussels in January 2020 and a visit by the European Parliament’s delegation to Washington D.C in February 2020. Both visits included discussions on AI with a variety of key stakeholders, such as NATO, representatives from the US Congress, State Department, Federal Transit Administration (FTA), Federal Bureau of Investigation (FBI), and Privacy and Civil Liberties Oversight Board (PCLOB).34

## Counterplan Answers

### A2: Domestic Counterplan

#### Domestic counterplan can’t solve for AI—international cooperation is necessary:

DEPARTMENT OF DEFENSE, 2/12/2019 (“SUMMARY OF THE 2018 DEPARTMENT OF DEFENSE ARTIFICIAL INTELLIGENCE STRATEGY,” Retrieved 6/12/2022 from <https://media.defense.gov/2019/Feb/12/2002088963/-1/-1/1/SUMMARY-OF-DOD-AI-STRATEGY.PDF>.)

We cannot succeed alone; this undertaking requires the skill and commitment of those in government, close collaboration with academia and non-traditional centers of innovation in the commercial sector, and strong cohesion among international allies and partners. We must learn from others to help us achieve the fullest understanding of the potential of AI, and we must lead in responsibly developing and using these powerful technologies, in accordance with the law and our values.

### A2: Non-NATO Counterplan

#### NATO is uniquely situated to create AI norms and promote standards that shape AI development in the future.

Zoe Stanley-Lockman, 2022 (Defense and Strategic Studies, Nanyang Technological University, “NATO’s Role in Responsible AI Governance in Military Affairs,” [https://www.oxfordhandbooks.com/view/ 10.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69](https://www.oxfordhandbooks.com/view/%2010.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69), Retrieved 6/11/2022)

NATO’s increasing interest in EDTs introduces the need to consider how governance priorities can help reinforce the Alliance’s influence. The STS and military innovation literature provide the theoretical foundations for NATO’s stewardship of AI as they place attention on “the role that institutions play in shaping technological trajectories.”45 As AI development continues, the actions that NATO and its members take will have important implications for their capacity to adopt, respond to, and shape their future operating environment. Particularly for democracies, this confers to military stakeholders a dual responsibility to prevent and manage risks, as well as to proactively shape their approach to technological development anchored in democratic values and security. As a multinational alliance with an incentive to drive cooperation and alignment, NATO is situated to define and operationalize norms, as well as promote standards that help shape the contours of future military effectiveness and technological competition. In a RRI framework, not only is this an institutional role, but it also becomes an institutional responsibility. To apply this responsibility to NATO’s stewardship of AI, the institutional interplay between technology, structure, and concepts is a form of socio-technical system with important implications for AI governance because they link the ways that an institution uses its power to adopt and shape AI trajectory to its respective ends. Already, several mechanisms are built into military bureaucracies to ensure that technology is adopted in alignment with responsible engineering practices and responsible state behavior.46 The Alliance is organized to harmonize between Allies so that their contributions enhance military effectiveness and political cohesion between like-minded democracies. We argue that these effectiveness-centric mechanisms likewise empower NATO to exert its influence in technology governance. More specifically, this entails the Alliance helping steward technological development for a more predictable strategic environment and enhanced democratic clout around the exploitation of technology reinforcing rule of law. For NATO, we focus on strategic and policy planning, as well as standards and certification because they reflect the Alliance’s particular strengths and interests in S&T. These practices are relevant to governance insofar as they exemplify an institution’s power to shape the trajectory of technological development—but this selection is by no means exhaustive.47

#### NATO is key to transatlantic alignment on AI issues:

CENTER FOR EUROPEAN POLICY ANALYSIS, 2/17/2021 (“NATO Leadership on Ethical AI is Key to Future Interoperability,” <https://cepa.org/nato-leadership-on-ethical-ai-is-key-to-future-interoperability/>., Retrieved 6/15/2022)

The transatlantic partnership must focus on coordinating these core principles and systematic governance to ensure AI systems development aligns with the rule of law and democracy. In particular, this must ensure answering questions about human dignity, human control, and accountability. NATO is the ideal defense and security forum for this alignment. Given the US lead on adopting ethical principles for the entire DoD and the EU’s drive to assert checks and balances for private-sector tech companies, NATO remains the organization that can bring these two together and establishes the ethical bottom line. These will then ensure the diverging legal and ethical stances towards Big Tech do not lead to an interoperability barrier in the future. If developments surrounding the General Data Protection Regulation (GDPR) and the challenges it brought for U.S.-based, data-driven companies are any indication, a strong transatlantic led initiative is needed in order to ensure the same challenges do not hinder NATO.

#### NATO standards on AI will help develop world standards on AI technology.

Amanda Miller, 12/13/2021 (staff writer, AIR FORCE MAGAZINE, “NATO’s Plan to Grow Trust in Military AI,” <https://www.airforcemag.com/natos-plan-to-grow-trust-in-military-ai/>, Retrieved 6/15/2022)

Western militaries—already “late to the party” in the creation of artificial intelligence—risk unforeseen consequences by adopting AI made for the commercial sector, said NATO’s David van Weel. That’s why the alliance is publicizing a new plan by which it hopes its governments will get involved in AI development from the start, both for security reasons and to “bridge a gap of distrust” in the technology. Though he acknowledged that sharing the plan is a bit out of character for NATO, all 30 nations, including the U.S., have signed on. “We are not known, at NATO, for publishing a lot,” said van Weel, assistant secretary general for emerging security challenges. “We try to keep secrets a lot.” Van Weel introduced NATO’s AI strategy, published in October, during an American Enterprise Institute webinar Dec. 7. The webinar “Artificial Intelligence: Can We Go From Chaos to Cooperation?” accompanied the release of AEI’s paper, “Artificial Intelligence: The Risks Posed by the Current Lack of Standards.” As a “pervasive technology,” AI will “have an impact on everything we do,” said van Weel. Setting aside “the killer robot discussion,” van Weel dismissed the notion of excluding AI from all military uses: “The idea that AI would not be used for defense purposes is like saying that the steam engine, when it was invented, could only be used for commercial purposes, or electricity would not be supplied to the military.” But being behind the private sector in AI development has left governments “in a situation where regulation comes after the broad use and misuse of technology,” van Weel said. “So we need to be early to the party and make sure that we understand new technologies, not to militarize them—no, but to understand the security and defense implications.” Van Weel said military uses of AI should be regulated, but “you don’t want to over-regulate if you don’t know that you can defend yourself within the regulations that you’re proposing.” He provided the example of drone swarms “that collectively, powered by AI, are able to follow an intrinsic pattern—for example, our water supply or one of our cities. So how do we defend against them? Well, we can’t, frankly, because you need AI in that case in order to be able to counter AI.” But even among peers, he describes skepticism. “I’ve been on panels quite a lot where people say, ‘Well, please, I don’t trust the defense use of artificial intelligence,’ and that’s something we need to address,” van Weel said. “We are a trusted user. We—NATO, all the 30 allies—we all subscribe to the democratic values. We all subscribe to the values our societies are built upon, and we’re there to protect them.” NATO’s strategy proposes six principles of responsible use of AI similar to the Defense Department’s Ethical Principles for Artificial Intelligence adopted in 2020—but with a plan to verify that the principles are followed. According to NATO’s list of attributes, military AI should be lawful; responsible and accountable; explainable and traceable; reliable; governable; and having bias mitigation. To engender confidence in the principles, NATO has also proposed a new initiative. “Principles are nice, but they need to be verifiable as well, and they need to be baked in from the moment of the first conception of an idea up until the delivery,” van Weel said. To that end, to verify new AI, NATO wants to create test centers, co-located with universities throughout the alliance. This includes “existing test centers with knowledge, where allies that are thinking about co-developing AI for use in the defense sector can come in and verify, with protocols, with certain standards that we’re setting, that this AI is actually verified,” van Weel said. “It’s not a world standard yet, but if the 30 nations, Western democracies, start out by shaping industry to adhere by these standards, then I feel that we are making an impact, at least in the development of AI and hopefully also in the larger world setting standards.”

#### NATO is key to multinational alignment on AI policy—three reasons:

Zoe Stanley-Lockman, 2022 (Defense and Strategic Studies, Nanyang Technological University, “NATO’s Role in Responsible AI Governance in Military Affairs,” [https://www.oxfordhandbooks.com/view/ 10.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69](https://www.oxfordhandbooks.com/view/%2010.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69), Retrieved 6/11/2022)

To begin to fill this gap, the analysis in this chapter centers on two AI governance mechanisms that NATO has at its disposal, and subsequently explores the Alliance’s capacity to use these mechanisms to exert its influence in key pillars of AI governance. Of the many possible AI governance mechanisms for NATO, this chapter offers a deeper assessment of two: (1) strategic and policy planning and (2) standards and certification. We fashion these mechanisms as primary components that connect NATO technology governance measures and responsible AI use.12 To illustrate NATO’s capacity to govern AI, we then examine three pillars, or foundational issue areas, which we believe represent critical elements of technology governance. We argue that, within each pillar, NATO is uniquely situated to facilitate cooperation via its governance mechanisms, with a view to shaping the future of AI for the Alliance and maintaining a competitive edge. Each pillar—(1) ethics and values, (2) legal norms, and (3) security and safety—is an area where researchers and analysts have acknowledged significant governance challenges, both at a national level and for international organizations like NATO. Each pillar, discussed in depth below, illustrates NATO’s potential as a governance stakeholder that can encourage multinational alignment on policy and standards for safer and better outcomes in future operations.

#### NATO has a unique role to play as an AI leader.

Zoe Stanley-Lockman, 2022 (Defense and Strategic Studies, Nanyang Technological University, “NATO’s Role in Responsible AI Governance in Military Affairs,” [https://www.oxfordhandbooks.com/view/ 10.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69](https://www.oxfordhandbooks.com/view/%2010.1093/oxfordhb/9780197579329.001.0001/oxfordhb-9780197579329-e-69), Retrieved 6/11/2022)

At the core, this chapter argues that NATO is well positioned to steward the development of military AI and institute governance mechanisms towards coalition inclusion of responsible AI while simultaneously maintaining incentives for comparative advantage. Using the three pillars—ethics and values, legal norms, and safety and security—as issue areas which present AI governance challenges, we show that NATO has space to emerge as a leader in AI governance and contribute to responsible adoption of EDTs in the international security environment. This builds on foundations that derive NATO’s responsibilities to govern AI according to its values, legal obligations, and institutional interests. These foundations from both STS and military innovation studies offer ways that the Alliance can activate its existing governance mechanisms to exert influence in new ways. Not only is this influence important for the Alliance to bolster its institutional relevance in an evolving international security architecture, but it also dovetails with its capacity to shore up military effectiveness and interoperability as Allies modernize their arsenals and associated concepts into the frontier of AI.

### A2: Private Sector Counterplan

#### Private sector AI can’t lead to AI leadership—the government is critical.

Michael C. Horowitz, 2018 (Professor at the University of Pennsylvania, “Artificial Intelligence, International Competition, and the Balance of Power,” Retrieved 6/11/2022 from <https://tnsr.org/2018/05/artificial-intelligence-international-competition-and-the-balance-of-power/>)

Some might argue that it is necessary for the United States to develop and announce a formal AI strategy similar to China’s.122 While there are plenty of private-sector incentives for the development of AI technology, only the government can coordinate AI investments and ensure the development of particular implementations that it considers critical for AI leadership.123