## Aff

### +Uniqueness

#### We’re losing the ai race now – cooperation is key

Wodecki 22

(Ben, “NATO at risk of losing AI innovation race to Russia, China”, <https://aibusiness.com/document.asp?doc_id=777260>) DB

The North Atlantic Treaty Organization (NATO) should standardize and regulate AI to keep up with rivals, according to findings published by the U.S. think tank, Center for European Policy Analysis (CEPA).

CEPA’s comments came as it published a series of AI-related recommendations for NATO amid growing geopolitical tensions with the likes of Russia, China and North Korea.

Its recommendations include AI standardization, encouraging and improving AI literacy and spurring private sector innovation.

Such undertakings would allow NATO allies to better scale and deploy AI – and keep pace with rivals.

“These new capabilities will revolutionize NATO’s military and strategic affairs, thus strengthening NATO’s ability to fulfill its essential core tasks of collective defense, crisis management and cooperative security,” CEPA’s Nicholas Nelson and Nico Luzum wrote.

The pair cited AI projects being undertaken by adversaries, including China’s attempts to develop purported mind-controllable drones and AI assistants for fighter pilots.

But NATO allies have their own capabilities – including U.S.-developed autonomous tanks and British-made systems that provide ground troops with information on the surrounding terrain.

The think tank’s study suggests that at present, NATO is leading the AI race – but risks losing its competitive advantage to peer competitors “competitors if allies fail to leverage the private sector, coordinate implementation and engage with the public.”

CEPA suggests that NATO allies should accelerate AI adoption and actively encourage private sector innovation.

“Ultimately, we hope that these recommendations enable NATO allies to better innovate, scale, deploy, and integrate AI and autonomy-based technologies to form agile, system-wide solutions.

### turn

#### AI cooperation is key to Nato’s threat response – turns the da

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(Joanna, “NATO Leadership on Ethical AI is Key to Future Interoperability”, <https://cepa.org/nato-leadership-on-ethical-ai-is-key-to-future-interoperability/>) DB

In October 2020, Deputy Secretary General of NATO Mircea Geoană highlighted the benefits of establishing a “transatlantic community cooperating on Artificial Intelligence (AI).” The Deputy Head of NATO’s Innovation Unit followed with a commitment to its responsible use. The US Department of Defense (DoD) adopted Ethical Principles for AI in 2020 and has committed to bringing together NATO member and partners to operationalize these principles. Despite these statements and developments, more work is required to tackle the very real challenge that ethical AI will pose to future interoperability within NATO.

Without a NATO-led initiative focused on aligning these ethical principles across the Alliance, the interoperability risk of nations fielding AI-based systems that hinder joint operations is high. As the foremost security framework for Europe and North America, as well as the leading defense alliance for promoting and protecting democratic values, NATO is able to facilitate alignment on this issue. As part of a broader strategy on emerging and disruptive technologies, NATO must prioritize ethical AI if it wishes to promote the shared values upon which it was founded, play a key role in facilitating innovation across the Atlantic, and ultimately retain the ability of its members to undertake joint operations.

Establishing NATO ethical AI principles is the first step toward both technical and political alignment, in turn enhancing and fostering interoperability, which is the foundation for NATO to respond to emerging threats as an Alliance, in a flexible and timely manner.

A key challenge for NATO is raising awareness that the answers to ethical questions can no longer be left to later stages of the development and procurement cycle. Decisions made at the political and legal level will have a significant impact on the engineering practices used to develop AI, as well as the technical characteristics of the AI-based systems. The answers to questions such as respecting human dignity, human control, and accountability will be the foundation upon which many technical elements are programed. Systems developers need to make a number of calls throughout the development cycle informed by the answers to key questions, including:

how to label data

what data to use, and

what is an acceptable outcome?

These answers will also impact how AI systems are evaluated and ultimately deployed.

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.

The role of the private sector is another aspect of ethical AI development that has proved a challenge to governments and the transatlantic relationship. Within states, governments have struggled to adequately regulate Big Tech firms, which has led to these companies encroaching on government responsibilities to protect and uphold the public interest. This encroachment permeates all aspects of government, including defense and security. As Deputy Secretary of Defense Kathleen Hicks discussed during her confirmation hearings, the lack of competition is also a challenge to innovation in the private defense industry. This, along with a lack of regulation, feeds into the power imbalance between the sectors. Consequently, private sector companies building the AI and AI systems that are or will be deployed on the battlefield are deciding the ethics policies for themselves.

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.

The solution to the challenge that ethical AI poses for the future of interoperability within NATO is for the Alliance to establish shared transatlantic ethical principles, informed by the US DoD, the EU, and others. Establishing these principles will not only strengthen transatlantic political relations; more technically, it will allow for the establishment of standardization agreements and inform training and education initiatives of the Alliance in the future.

### No link

#### AI coop doesn’t undermine US innovation

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(Christie and Sean, “The Case for Increased Transatlantic Cooperation on Artificial Intelligence”, <https://www.belfercenter.org/publication/case-increased-transatlantic-cooperation-artificial-intelligence>) DB

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.

The Current State

The United States and the European Union are separately assessing and updating their AI strategies. However, it is a myth to assume they are not collaborating at all to advance their AI-related goals. Transatlantic cooperation on AI norms, standards, research and development, and data sharing should increase, but the United States and the European Union can build upon an existing foundation for a stronger alliance.

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

The United States’ federal government has made key strategic and tactical changes to achieve these goals. Federal AI R&D and the American AI Initiative are coordinated by several committees and subcommittees within the Executive Office. President Trump pledged to more than double non-defense AI R&D to $2 billion by 2022.14 Federal AI R&D, guided by the National AI R&D Strategic Plan, must now be reported annually for each federal entity.15 The United States has taken a “light-touch” approach to regulation, fearing overly burdensome laws will stifle innovation. However, guidance is not completely absent. The Office of Management and Budget released a memo to guide Federal agencies as they develop regulatory and non-regulatory approaches to non-government applications of AI and the Department of Defense published five AI principles to guide AI design, deployment, and adoptions in defense.16

Obstacles to the US realizing its goal of global AI leadership exist, despite the government’s prioritization of it. Key obstacles include the need to bolster its private sector AI landscape; address regulatory or standards gaps to safeguard American values; repair the breakdown of funding and information sharing relationships between academia, industry, and government; grow its AI workforce; and further increase its federal AI R&D funding.

European Union: The European Union, like the United States, intends to leverage AI’s potential as a strategic and transformative technology.17 However, the EU has positioned itself as a leader in trustworthy, human-centric, ethical, and values-based AI,18 in comparison to the US government’s emphasis on the need for AI innovation to protect American values, civil liberties, and privacy. The EU recognizes that it trails behind the US and China in terms of volume of investment and maturity of its tech industry.19 Nonetheless, the EU believes it can capitalize on its underlying structural strengths (e.g., academic and innovation record) and on its values to compete globally and reaffirm its digital and technological sovereignty.20 Starting with its 2018 Communication: Artificial Intelligence for Europe,21, 22 the European Commission (EC) has launched a coordinated effort promoting AI.23 Policies include increasing public and private investments from $5.6 billion to $22 billion annually;24 coordinating research and innovation across Europe; devising ethical guidelines; fostering digital skills in its workforce; and promoting public and private sector adoption of AI.25 To support and counsel these efforts, the EC has established the High-Level Expert Group on AI (AI HLEG) comprising 52 experts who advise the Commission on policy and regulatory changes.

The European Union’s Juncker26 Commission (2014-2019) actively avoided regulating AI, causing the European Parliament to increase their efforts as a proactive voice in favor of stronger AI regulation. However, since the beginning of Ursula von der Leyen’s tenure, the Commission has initiated efforts to adopt stronger regulation for AI applications (i.e., differentiating regulation of AI based on defined “high-risk” and “low-risk” sectors”) and associated data spaces.27,28 These legislative proposals and their associated discussions are planned to be completed by the end of 2020. During the strategic planning and budgeting process of its R&D programs, the EU committed to providing at least EUR10.7 billion29 for AI-related research conducted between 2021 and 2027.30 Despite these financial and political efforts, the EU still remains technologically dependent on the US and China and suffers from a lack of capital and private funding, decentralized and uncoordinated AI expertise, severe brain drain (including to the US), and slow adoption of AI programming in its education and public sectors.

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

Transatlantic collaboration for AI-related research is taking place at varying levels although these projects are relatively ad hoc and materialize within existing scientific and technological research agreements and roadmaps. For instance, the current Roadmap for US-EU Science & Technology prioritizes four areas for transatlantic cooperation, most of which leverage AI (e.g., health, transportation, bioeconomy, marine and arctic research) or promote institutions that do (e.g., European Organization for Nuclear Research or CERN).35, 36 These collaborative links are supported and promoted through a variety of arrangements and initiatives, such as BILAT 4.0, EURAXES37 or the European Network of Research and Innovation Centers and Hubs (ENRICH). In general, and despite challenges to systematically integrating US entities into European research programs, the US remains the leading non-EU (“third country”) participant in Horizon 2020,38 with over 60 participations and 1,200 partnerships.39 US funding contributions to Horizon 2020 and participation in AI-related projects, however, is meager than its broader research involvement in Horizon 2020. For instance, US collaborative links with Horizon 2020 projects can only be found in 2% of AI-related projects, 12% of deep learning projects, and 4% of machine learning-related projects.40 Accordingly, there is still plenty of room for improvement.41

### No impact

#### No emerging tech impact.

Sechser et al. 19, \*Todd S., Pamela Feinour Edmonds and Franklin S. Edmonds, Jr. Discovery Professor of Politics and Public Policy at the University of Virginia and Senior Fellow at the Miller Center of Public Affairs, \*\*Neil Narang, Associate Professor of Political Science at the University of California, Santa Barbara, \*\*\*Caitlin Talmadge, Associate Professor of Security Studies in the School of Foreign at Georgetown University. ( “Emerging technologies and strategic stability in peacetime, crisis, and war”, *Journal of Strategic Studies*, 42:6, pg. 728-729)

Yet the history of technological revolutions counsels against alarmism. Extrapolating from current technological trends is problematic, both because technologies often do not live up to their promise, and because technologies often have countervailing or conditional effects that can temper their negative consequences. Thus, the fear that emerging technologies will necessarily cause sudden and spectacular changes to international politics should be treated with caution. There are at least two reasons to be circumspect. First, very few technologies fundamentally reshape the dynamics of international conflict. Historically, most technological innovations have amounted to incremental advancements, and some have disappeared into irrelevance despite widespread hype about their promise. For example, the introduction of chemical weapons was widely expected to immediately change the nature of warfare and deterrence after the British army first used poison gas on the battlefield during World War I. Yet chemical weapons quickly turned out to be less practical, easier to counter, and less effective than conventional high-explosives in inflicting damage and disrupting enemy operations.6 Other technologies have become important only after advancements in other areas allowed them to reach their full potential: until armies developed tactics for effectively employing firearms, for instance, these weapons had little effect on the balance of power. And even when technologies do have significant strategic consequences, they often take decades to emerge, as the invention of airplanes and tanks illustrates. In short, it is easy to exaggerate the strategic effects of nascent technologies.7 Second, even if today’s emerging technologies are poised to drive important changes in the international system, they are likely to have variegated and even contradictory effects. Technologies may be destabilising under some conditions, but stabilising in others. Furthermore, other factors are likely to mediate the effects of new technologies on the international system, including geography, the distribution of material power, military strategy, domestic and organisational politics, and social and cultural variables, to name only a few.8 Consequently, the strategic effects of new technologies often defy simple classification. Indeed, more than 70 years after nuclear weapons emerged as a new technology, their consequences for stability continue to be debated.9

#### AI won’t undermine nuclear stability

Sankaran 19

(Jaganath, assistant professor at the Lyndon B. Johnson School of Public Affairs at the University of Texas at Austin, “A DIFFERENT USE FOR ARTIFICIAL INTELLIGENCE IN NUCLEAR WEAPONS COMMAND AND CONTROL”, War on the Rocks, 4/25, <https://warontherocks.com/2019/04/a-different-use-for-artificial-intelligence-in-nuclear-weapons-command-and-control/>) DB

Decision-makers who stand guard at the various levels of the nuclear weapons chain of command face two different forms of stress. The first form of stress is information overload, shortage of time, and chaos in the moment of a crisis. The second is more general, emerging from moral tradeoffs and the fear of causing loss of life on an immense scale. AI and big data analysis techniques have already been applied to address the first kind of stress. The current U.S. nuclear early warning system employs a “dual phenomenology” mechanism designed to ensure speed in detecting a threat and in streamlining information involved in the decision-making process. The early warning system employs advanced satellites and radars to confirm and track an enemy missile almost immediately after launch. In an actual nuclear attack, the various military and political personnel in the chain of command would be informed progressively as the threat is analyzed, until finally the president is notified. This structure substantially reduces information overload and chaos for decision-makers in a crisis. However, as Richard Garwin writes, the system also reduces the role of the decision-maker “simply to endorse the claim of the sensors and the communication systems that a massive raid is indeed in progress.” While the advanced technologies and data processing techniques used in the early warning system reduces the occurrence of false alerts, it does not completely eliminate the chances of one occurring. In order to address decision-makers’ fear of inadvertently starting a nuclear war, 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. Such an algorithm could verify the authenticity of an alert from other diverse perspectives, in addition to a purely technological analysis. Incorporating this element into the nuclear warning process could help to address the second form of stress, reassuring decision-makers that they are sanctioning a valid and justified course of action. Command and Control During the Cold War: The Importance of Big Data In the world of nuclear command and control, the pursuit of speed and analysis of big data is old news. In the early 1950s, before the advent of nuclear intercontinental ballistic missiles (ICBMs), the United States began developing the SAGE supercomputer. SAGE, which was built at approximately three times the cost of the Manhattan Project, was the quintessential big data processing machine. It used the fastest and most expensive computers at the time – the Whirlwind II (AN/FSQ-7) IBM mainframe computers – at each of 24 command centers to receive, sort, and process data from the many radars and sensors dedicated to identifying incoming Soviet bombers. The SAGE supercomputer then coordinated U.S. and Canadian aircraft and missiles to intercept those bombers. Its goal was to supplement “the fallible, comparatively slow-reacting mind and hand of man” in anticipating and defending against a nuclear bomber campaign. The proliferation of ICBMs in the 1960s, however, made the SAGE command centers “extraordinarily vulnerable.” The U.S. Air Force concluded that Soviet ICBMs could destroy “the SAGE system long before the first of their bombers crossed the Arctic Circle.” In 1966, speaking at a congressional hearing, Secretary of Defense Robert McNamara argued that “the elaborate defenses which we erected during the 1960s no longer retain their original importance. Today with no defense against the major threat, Soviet ICBMs, our anti-bomber defense alone would contribute very little…” The SAGE command centers were shut down. McNamara formed a National Command and Control Task Force, informally referred to as the Partridge Commission, to study the problem of nuclear command and control in the early days of the ICBM era. The commission concluded “that the capabilities of US [nuclear] weapon systems had outstripped the ability to command and control them” using a decentralized military command and control structure. The commission recommended streamlining and centralizing command and control with much stronger civilian oversight. The commission also advocated the formation of the modern-day North American Aerospace Defense Command, better known as NORAD, with its advanced computer and communication systems, early warning satellites, and forward-placed radars designed to track any missile launch on the planet before it could reach the continental United States. NORAD and its computer and communication systems were designed to resolve the stress from information overload by compartmentalizing and automating the process of evaluating a threat. Depending on its particular trajectory, an enemy nuclear missile may take anywhere between 35 minutes to just eight minutes to reach its target. When the launch of an enemy missile occurs, it is first picked up by early warning satellite sensors within seconds. The satellites track these missiles while the engines are still ignited. Once the missile comes over the horizon, forward-deployed radars independently track them. The data from the two systems is then assessed in the context of the prevailing geostrategic intelligence by NORAD. NORAD would then pass the assessment up the military and political chain of command. This sequence of steps ensures that senior decision-makers are not overwhelmed with information. By the time decision-makers are notified, the decision to retaliate to an apparent attack “must be made in minutes.” Future advances in AI might only add incremental improvements to the speed and quality of information processing to this already advanced nuclear early warning system. Using AI to Prevent Inadvertent Nuclear War These advances in nuclear command and control still do not directly address the second form of stress, one that emerges from the fear of a nuclear war and the accompanying moral tradeoffs. How can AI mitigate this problem? History reminds us that technological sophistication cannot be relied upon to avert accidental nuclear confrontations. Rather, these confrontations have been prevented by individuals who, despite having state-of-the-art technology at their disposal, proffered alternate explanations for a nuclear warning alert. Operating under the most demanding conditions, they insisted on a “gut feeling” that evidence of an impending nuclear war alert was misleading. They chose to disregard established protocol, fearing that a wrong choice would lead to accidental nuclear war. Consider for example a declassified President’s Foreign Intelligence Advisory Board report investigating the decision by Leonard Perroots, a U.S. Air Force lieutenant general, not to respond to incoming nuclear alerts. The incident occurred in 1983 when NATO was conducting a large simulated nuclear war exercise code-named Able Archer. The report notes that Perroots’ “recommendation, made in ignorance, not to raise US readiness in response” was “a fortuitous, if ill-informed, decision given the changed political environment at the time.” The report also states: the military officers in charge of the Able Archer exercise minimized this risk by doing nothing in the face of evidence that parts of the Soviet armed forces were moving to an unusual level of [nuclear] alert. But these officers acted correctly out of instinct, not informed guidance. Perroots later complained in 1989, just before retiring as head of the U.S. Defense Intelligence Agency, “that the U.S. intelligence community did not give adequate credence to the possibility that the United States and Soviet Union came unacceptably close to [accidental] nuclear war.” In the same year, Stanislav Petrov, a commanding officer involved in Soviet nuclear operations, also dismissed a nuclear alert from his country’s early warning system. In the face of data and analysis that confirmed an incoming American missile salvo, Petrov decided the system was wrong. Petrov later said, “that day the satellites told us with the highest degree of certainty these rockets were on the way.” Still, he decided to report the warning as a false alert. His decision was informed by fears that he “didn’t want to be the one responsible for starting a third world war.” Later recalling the incident, he said: “I had a funny feeling in my gut. I didn’t want to make a mistake. I made a decision, and that was it. When people start a war, they don’t start it with only five missiles.” Both, Perroots and Petrov feared the moral consequences of a nuclear war, particularly one initiated accidentally. They distrusted the data and challenged protocol. Conclusion Fred Iklé once remarked, “if any witness should come here and tell you that a totally reliable and safe launch on warning posture can be designed and implemented that man is a fool.” If that is true, how close can AI get us to reliable and safe nuclear command and control? AI-enabled systems may aspire to reduce some of the mechanical and human errors that have occurred in nuclear command and control. Prior instances of false alerts and failures in early warning systems should be used as a training dataset for an AI algorithm to develop benchmarks to quickly test the accuracy of an early warning alert. The goal of integrating AI into military systems should not be speed and accuracy alone. It should also be to help decision-makers exercise judgment and prudence to prevent inadvertent catastrophes.