**AFF Packet – Mean Green Debate**

**Intro Stuff**

**Topic**

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

**Definitions**

Definitions of AI

1. Artificial intelligence (AI) is the ability of a computer or a robot controlled by a computer to do tasks that are usually done by humans because they require human intelligence and discernment. – Britannica
2. In his book Sentient Machine, Amir Husain defines AI as “the overarching science that is concerned with intelligent algorithms, whether or not they learn from data.

EDTs = Emerging and Disruptive Technologies

STS studies = Science, technology, and society studies

RRI = responsible research and innovation—Focused on responsible innovation

Corrigibility = capable of being corrected, reformed, or improved.

CDA = The DoD’s new Office of the Chief Data and AI Officer

Interoperability = the ability of computer systems or software to exchange and make use of information. AND/OR the ability of military equipment or groups to operate in conjunction with each other.

**Intro cards**

**Intro to NATO’s role in AI/Emerging Tech**

**Stanley-Lockman & Trabucco 3/22**

Zoe Stanley-Lockman & Lena Trabucco , “NATO’s Role in Responsible AI Governance in Military Affairs”, Zoe Stanley-Lockman Nanyang Technological University, Lena Trabucco University of Copenhagen, Center for Military Studies The Oxford Handbook of AI Governance Edited by Justin Bullock, Yu-Che Chen, Johannes Himmelreich, Valerie M. Hudson, Anton Korinek, Matthew Young , and Baobao Zhang Subject: Political Science, Political Institutions Online Publication Date: Mar 2022DOI: 10.1093/oxfordhb/9780197579329.013.69

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.

**Intro to China view on AI**

**Sullivan** 10/4/20**21**

Ryan Sullivan Army pilot studied at the prestigious Fudan University in Shanghai, China, as an Olmsted Scholar graduate-level work in the field of Artificial Intelligence to deliver an in-depth study of the critical elements of U.S.-China competition in Artificial Intelligence, “The U.S., China, and Artificial Intelligence Competition Factors”, <https://www.airuniversity.af.edu/Portals/10/CASI/documents/Research/Cyber/2021-10-04%20US%20China%20AI%20Competition%20Factors.pdf?ver=KBcxNomlMXM86FnIuuvNEw%3D%3D> – ECM

In his book Sentient Machine, Amir Husain defines AI as “the overarching science that is concerned with intelligent algorithms, whether or not they learn from data.”5 This paper centers on competition within the scope of narrow AI and not artificial general intelligence (AGI).6 Rapid breakthroughs in machine learning (ML) resulted from an open ecosystem that encourages collaboration across platforms, unconstrained by national boundaries. The extent to which those collaborations should continue when the transfer of data, algorithms, and other dual-use technologies directly impact national security, is a central question facing AI competition with China. AI (人工智能) allows China to innovate and surpass the capabilities of other nations rapidly, often referred to in Chinese research as “overtake by changing lanes” (换道超车).7 Rapid innovation and focusing on emerging technologies without established global leadership is a way to build comprehensive national power to preserve domestic social stability, create economic and military strength, and protect core interests (核心利 益).7F8 China’s core interests extend beyond borders and into cyberspace (网络空间) **via the pursuit of AI norms that promote cyber sovereignty**.9 Protecting sovereignty for the Chinese Communist Party (CCP) **that appears fragile and insecure**, increasingly relying on AI as a means of promoting stability and growth within China to bolster the CCP’s legitimacy. As prominent Beijing scholar Wang Jisi notes, **the CCP’s legitimacy to govern is linked to performance and “the current mainstream view in China** emphasizes – party, government, military, then the people….and the Party leads everything.”10 Diverging values and competing national interests between democracies and the CCP amplify AI competition and challenge the U.S. and China to compete below the conflict threshold. Despite breakdowns in bilateral relations, zero-sum conflict is not predestined, as Shanghai scholar Wu Xinbo notes, “promoting pragmatic cooperation and constructive competition, effective management, control of risks, and prevention of major conflicts between China and the United States **remains the basic direction of China’s diplomacy with the U**nited **S**tates.”11 Several U.S. scholars and leaders such as Elizabeth Economy and Graham Allison also advocate cooperative approaches to competition by promoting coopetition, coevolution, or rivalry partnerships.12 Such strategies are hard to imagine in a period of increasingly strained bilateral relations and diverging values, and are likely to fail if the leaders of both nations maintain a binary approach to engagement. This paper explores competition through the lens of values, cohesion, influence, and legitimacy to better understand each nation’s positional advantages and identify possibilities for cooperation in bilateral or multilateral engagements.

**AI strengthens the CCP’s ability to preserve power through expansions of its targeted population programs** (重 点人口)·**and increased surveillance of its people**.13 The People’s Liberation Army (PLA) is the Army of the Party and plays an essential role in domestic security. AI’s role in surveilling and suppressing society for the benefit of a ruling entity represents a values conflict and the most significant single obstacle to cooperation on AI norms, rules, and procedures between our nations. As China seeks to export surveillance technology and gain access to international data, a sense of urgency emerges over China’s efforts to legitimize its authoritarian governance model and to secure its interests through promoting standards and norms in international institutions. The “China Standard 2035” plan was not released in 2020 as expected. However, the focus on protecting core interests, strengthening emerging industries, pursuing leadership positions in international institutions, and extending global influence in the emerging world order by giving voice to developing nations, appear throughout the current 14th five-year plan (2020-2025), seeking to ensure the international order better represents China’s interests, including the Party’s values. This paper offers that the U.S. leads the overall AI competition with China, **but** that China retains the edge in both perceived utility and adaption of AI across society, a result of central planning efforts which better organizes China to promote AI applications at scale. China’s competitive advantage results from vast amounts of data generated from mobile payments, the pursuit of digital currency, and the widespread installation of cameras that feed predictive algorithms controlled by the CCP.14 In contrast, Americans remain mostly distrustful of authority, and mobile payments are less widely accepted. The concern over misinformation and the ethics of algorithms that reinforce desired content for users and increased partisanship will bring AI to the forefront of American discussion but will do little to encourage robust AI adoption. Without significant adoption the U.S. should increase investments in research into alternative means of synthetically generating data or techniques allowing deep learning (DL) to train effectively on smaller amounts of data.15 Achieving such success requires increased investments in basic research and a cohesive approach to policy and strategy that encourages domestic collaboration and R&D spending while strengthening international partnerships to address gaps or inefficiencies within the U.S. AI ecosystem effectively.

China views national strength as the foundation for global AI competition and Chinese scholars put forward the idea that “without national strength, how can we talk about standards.”16 Military-civil fusion (军民融合 战略) represents a cohesive approach to organizing talent and resources around a strategy to address domestic deficiencies, build national strength, and close the overall U.S. advantages in AI. The collaborative nature of AI research and reciprocal interaction by university scholars of AI and related techno-subjects present examples of “win-win” competition for both the U.S. and China. However, the Chinese military’s close relationship with many of China’s leading universities and AI-focused companies presents significant challenges to the notion of AI cooperation between the U.S. and China. In particular, the PLA’s exploration of brain science and pursuit of “brain control” (制脑权), which they consider the “new high ground” (新的高地), results from collaborations with industry and universities.17 Coupled with the concerns over intellectual property (IP) theft, espionage, visa restrictions, and export controls, the cohesion chapter explores the inherent risks to U.S. national security of pursuing collaboration and cooperation with China. The Chinese military directly benefits from working with national high technology enterprises such as Baidu, Alibaba, Tencent, and Huawei (BATH) and prestigious universities across China. Many U.S. companies and universities also work with those same Chinese universities through research centers and joint laboratories, generating U.S. national security concerns. China understands its second adapter advantages are dwindling.18 The open-source nature of AI research could likely end, threatening future Chinese AI development nearly as much as their hardware vulnerabilities and reliance on international firms within the global supply chain. The Chinese 19th National Congress in 2017 directed the requirement to strengthen “basic research” (基础研究) and “applied basic research” (使用基础研究), making universities the focal point of this effort.19 With a large population and a focused government driving investments, quantity is not the issue in China, but quality remains a concern. Quantity superseding quality applies to the number of sciences, technology, engineering, math (STEM) graduates, patents, research papers, and supercomputers. China is closing the gap, but the U.S. is well-positioned to maintain its advantages, provided America recognizes the importance of attracting top foreign talents and reinvest in STEM and research and development (R&D).

China’s approach to AI utilization presents nations of the world with an alternative model to the democratic prosperity narrative. AI also allows Beijing to project its alternative views on power abroad and nurture China’s influence among developing nations, which will prove critical when the time comes for China to push for acceptance of Chinese standards and norms. However, influence focuses on China’s competing models in overseas markets and AI’s role in providing security, economic development, and improved livelihoods for nations. Global concerns over Huawei and regional concerns over Belt and Road Initiative (BRI) represent just some of the problems facing China’s overseas forays. The use of AI at home and abroad, while attractive to some autocratic leaders, creates a significant cause for concern in other countries regarding ethical concerns or applications of AI. Lack of transparency in BRI projects and handling of COVID does little to demonstrate to other nations that China will act in good faith or adhere to the standards and norms of most countries. Detention camps in Xinjiang and repression of dissidents in Hong Kong continue to impact Xi’s global favorability ratings. However, China’s core interests, particularly sovereignty and territorial integrity, remain red lines that stoke conflict rather than competition. The U.S. withdrawal from the Trans-Pacific Partnership (TPP) and refusal to participate in Asia Infrastructure Investment Bank (AIIB) or other China-led initiatives leads one to believe that competing for influence is an area of zero-sum competition; however, the lack of international standards and norms concerning data and ethical applications of AI extend beyond the ability of the U.S. or China to unilaterally impose solutions. Competing for influence gives rise to input from other nations. While the U.S. would appear to possess an advantage based on standing alliances and shared liberal democratic values, data privacy concerns among democratic nations differ widely and offer opportunities for both the U.S. and China to collaborate with other nations on a global solution.

With domestic stability and its emergence as a global power, **Beijing hopes to parlay increased international influence and legitimacy to pursue global standards that better represent Chinese values and norms**. With the publication of the “Beijing AI Principles” and “Global Initiative on Data Security,” the competition for AI norms is underway.20 China’s antagonism toward the U.S. as a “technological hegemon” (技术霸权) **and Beijing’s explicit support for multipolarity** **highlights the CCP belief that “multipolarity is more sustainable than unipolarity**, while less divisive and antagonistic than bipolarity” and that “multipolarity could be less predictable than both unipolarity and bipolarity.”21 Thus, China may continue to pursue AI norms through the existing global framework but will prepare for the prospects of decoupling if Chinese standards fail to gain acceptance. The idea of “two systems, three worlds” (两大体系， 三大世界) goes beyond 5G, and Chinese initiatives on satellite navigation and digital currency are other examples where decoupling could occur. 22 The importance of shared values and the role of soft and hard power will significantly influence the Sino-American competition over AI norms in the standing liberal, multipolar order. Competition, not conflict, is most likely to occur at a variety of levels. China, and the U.S., for that matter, remain dissatisfied with the current liberal world order. The Chinese perceive a decline in the U.S. desire to lead and an opportunity to reform existing organizations from within. All indications are that China views the UN as central to preserving a liberal order. As a nation that benefitted greatly from the current Westphalian order, China seems unlikely to pursue significant revisions in the structure or composition of the current world order for now. Seeking to work within the framework of the UN and World Trade Organization (WTO), China will promote a governance model that emphasizes sovereignty above all else, and minimize significant value conflicts by pursuing leadership positions and relying on support from sympathetic nations to block unfavorable or undesirable resolutions or actions. In an anticipated multipolar world order, Beijing will champion initiatives such as AIIB, BRI, or the Shanghai Cooperation Organization (SCO) as alternative models for collaboration and non-binding alliances that better represent developing nations. These organizations demonstrate an inclusive approach to membership, which Beijing hopes will validate their legitimacy to lead in an increasingly multipolar world.

**Affirmative**

**1AC v1**

**Plan**

**Resolved: The United States federal government should substantially increase its security cooperation with the North Atlantic Treaty Organization in artificial intelligence by**

* **Establishing a 10-year roadmap for upgrading data interoperability.**
* **A set of definitions over how AI should be used.**
* **Create a process for collecting technical and policy knowledge from international interactions with AI.**

**Advantages + Solvency**

**Advantage ( ): Cyber**

**Cyber-attacks are increasing against NATO nations**

**Check Point 3/21**/2022

“Cyber Attacks from Chinese IPs on NATO Countries Surge by 116%”, https://blog.checkpoint.com/2022/03/21/cyber-attacks-from-chinese-ips-on-nato-countries-surge-by-116/

Last week, Check Point Research (CPR) **observed an increase in cyber attacks aimed for NATO countries** that were sourced from Chinese IP addresses. CPR examined the trend before and after Russia’s invasion into Ukraine, learning that cyber attacks from Chinese IPs **jumped by 116%** on NATO countries, and 72% world-wide. CPR can not attribute the cyber attacks to the Chinese entities or to any known Chinese threat actor. The observation indicates a trend that hackers, likely within China and abroad, are increasingly using Chinese IPs as a resource to launch cyber attacks after the advent of the Russia-Ukraine conflict.

Check Point Research (CPR) sees an increase in cyber attacks sourced from Chinese IP addresses throughout the current Russia-Ukraine conflict.

* Last week, the weekly average of worldwide attacks originating from China per organization was 72% higher than before the invasion and 60% higher than the first three weeks of the conflict
* Last week, the weekly average of cyber-attacks sourced from China on NATO corporate **networks was 116% higher** than before the invasion, and 86% higher than the first three weeks of the conflict
* The increase is significantly higher than the overall global increase in cyber attacks seen during the same timeframes

**Ambiguity over how to respond results in adversary testing and miscalculation---that collapses cyber deterrence and cohesion**

**Patrick 18**.

Stewart M., James H. Binger Senior Fellow in Global Governance and Director of the International Institutions and Global Governance Program. "NATO's Deterrence Problem: An Analog Strategy for a Digital Age". Council on Foreign Relations. 8-8-2018. https://www.cfr.org/blog/natos-deterrence-problem-analog-strategy-digital-age

At their annual summit last month, the twenty-nine allies reaffirmed the integral role cybersecurity plays in NATO, creating a Cyberspace Operations Center to supplement existing cyber defense facilities and reaffirming the need for an offensive capability “to deter, defend against, and to counter the full spectrum of cyber threats.” Missing from the communique, however, were any rules of engagement for the cyber sphere. This raises the question: **How would NATO respond** if a member state were to **invoke Article V** of the North Atlantic Treaty following a **cyberattack**?

The NATO alliance has long maintained a policy of strategic **ambiguity** when it comes to nuclear policy, leaving open the possibility that a conventional attack might be met with a nuclear response. (By contrast, China and India have adopted “no–first use” policy for nuclear weapons.) NATO’s nascent cyber policy exhibits a similar ambiguity, intentionally leaving unclear how the alliance would react to a cyberattack. Rather than responding in kind, NATO might instead conduct conventional attacks, such as missile strikes, allowing for **rapid escalation**.

Early cyberattacks were largely seen as low-stakes events: an inconvenience for the financial sector and dangerous for personal data, but not a threat to national security or justification for a military response. This is no longer necessarily the case. A coordinated Russian cyberattack against a nuclear power plant in Europe and the United States could have devastating consequences, were it to result in major radiation leaks. An attack on a country’s electric grid, a softer target, could in theory cause hundreds of billions of dollars in damage and put lives at risk as traffic lights stop working, hospitals lose power, and unrest erupts.

Given these stakes, NATO has an obvious incentive to strengthen its capacity to deter and punish cyberattacks, including through conventional retaliation. A U.S. Department of Defense memorandum published in early 2017 stated that at least for the next decade, offensive cyber capabilities are likely to **outpace cyber defense**, making deterrence the most viable option. Both the United States and NATO also recognize that a devastating cyberattack could **quickly escalate to violent conflict** by triggering a conventional response. Unfortunately, the alliance’s policy of strategic **ambiguity falls short**. By failing to define the rules of engagement for retaliation, the alliance leaves **open the potential for chaos** in determining an appropriate response to cyberattacks. In doing so, **it invites adversaries to test the waters.**

Cyber deterrence is **inherently more challenging** than nuclear or conventional deterrence because such attacks are **difficult to definitively attribute** to a particular actor. For example, it is easier to mask the source of a cyberattack on a power grid than it would have been for the Warsaw Pact to conceal a massive incursion into West Germany. This attribution problem could **complicate NATO’s capacity** to conclusively determine the source of a cyberattack and justify **and conduct a timely conventional response**, particularly if member states diverge in their perceptions. This dilemma could **strain the foundations of collective defense and undermine any unified front against cyberattacks**.

For NATO to commit to military action, **all of its members would need certainty**, beyond a reasonable doubt, about the identity of the perpetrator. This is particularly true in the case of **Russia**—a known sponsor of cyberattacks. Without conclusive proof, it might be a challenge to convince a distant country like Portugal or a dangerously close one like Estonia to join in a counterattack. Complicating matters, such post-attack decisions would need to be made **quickly**, given Russia’s precedent of using cyberwarfare as a precursor to kinetic invasion. The need for speed leaves **little room for** philosophical **debates** over what constitutes an act of war.

To be sure, NATO’s strategic ambiguity is not without its benefits. Uncertainty about the threshold for a military response could persuade an adversary not to push the envelope with an audacious attack. But that same ambiguity could lead an adversary to **miscalculate**. Moreover, the doctrine also leaves open the possibility of **discord in the ranks** of NATO member states regarding how to deal with any such attack.

NATO’s policy of strategic ambiguity served it well during the long Cold War nuclear confrontation. But it may be **less appropriate to** the era of **cyberwarfare**, particularly given the problem of attribution and the potential for **inter-allied disagreement** on the appropriate response to any particular incident. NATO policymakers need to **resolve this dilemma** by formulating a more **explicit cyberwarfare doctrine** to which all of its member states can adhere. This should include updating their mutual understanding of **what constitutes an act of aggression** under NATO’s **collective defense provisions**, making explicit to potential adversaries just what its red lines are, and establishing clear procedures and channels for robust allied response to cyberattacks. Unless NATO **clarifies current ambiguities**, Russian **aggression in the cyber realm could go unchecked**.

**NATO recently agreed that a cyber-attack *CAN* trigger Article 5 – but ambiguity exist over when and how. NATO will respond militarily if it deems a violation has occurred.**

**Laity 3/2**/2022

Mark Laity, senior director at the StratCom Academy and former head of NATO’s military SHAPE Communications Division. ”Would a cyberattack on a NATO country trigger Article 5?”, <https://www.cybersecuritydive.com/news/cyberattack-nato-article-5/619654/> -- ECM

When a NATO official told Reuters that a cyberattack **could be considered an armed attack and trigger “Article 5,”** it was a significant moment. How significant is harder to judge.

“Article 5” is NATO’s holy grail, the core of what NATO is about. It is part of the Washington Treaty, signed in 1949, that set up the North Atlantic Treaty Organization, which started with 12 members and now has 30.

Article 5 states, “The Parties agree that an armed attack against one or more of them in Europe or North America shall be considered an attack against them all.”

So, an attack on Latvia is effectively the same as an attack on the United States – a powerful deterrent to a potential aggressor, but of course life is never that simple.

For decades it seemed simpler, as an armed attack would be obvious and NATO nations would respond with tanks, artillery, and warplanes. Now, in our new world, nations can be undermined through information warfare and infrastructure crippled by cyberattacks, often difficult to trace.

How NATO should respond to such attacks created much debate, first on the principles of whether a cyberattack could be considered an “armed attack,” and secondly if it is, what to do about it.

The first question has been answered: it can, but the circumstances in which it would are less clear, and I would say at present unknown even within the Alliance. We can assume it will have to clear a very high bar.

The second question is even harder, and it is worth returning to Article 5 here. Yes, an armed attack on one is considered an attack on all, but each member is only required to take ”…such action as it deems necessary, including the use of armed force...”

So, if for instance Latvia was attacked with tanks, individual nations are not obliged to respond with military force. Article 5 is powerful but how nations individually respond, with a lot or a little, is still up to them.

Nevertheless, a conventional military attack on a NATO nation would, I believe, get a massive response. Deterrence has worked. But when we move into the gray zone of “hybrid warfare” that response is harder to predict.

**This is one of the aims of Russia**n strategy towards NATO, to achieve its goals while operating below the threshold that will trigger Article 5. On cyber, those waters will be even muddier given how deniable activity is within cyberspace.

To that end, for instance, it has a technical agreement with the European Union and a NATO Industry Cyber Partnership. At SHAPE, NATO’s military headquarters, there is also a Cyberspace Operations Centre.

Currently, NATO is far more focused on defensive cyber, to secure its systems from attack, and the nature of that is a point of debate.

Many say passive cyber defense, where you simply build up your virtual walls, leaves the initiative with your adversary, enabling ~~him~~ **them to probe without consequence** until he finds your weak point. Effective defense means also going after the attacker and forcing him onto the back foot – so-called cyber offense. That is also what would be needed if NATO’s responding to an Article 5 breach.

It is also important to recognize NATO as an institution does not possess significant cyber capabilities. When it comes to activities, NATO is a command and control organization using hardware and personnel loaned by members.

Few nations have sophisticated cyber capabilities and for operational security reasons, they are closely guarded, rarely shared, and carefully used.

It means **if a cyberattack did trigger** NATO **Article 5**, then the actual use of cyber weapons would be outsourced to nations for use on behalf of the Alliance in a coordinated manner.

I am assuming, surely likely, that any first response to a cyberattack would include cyber. However, as the NATO source told Reuters, a response does not have to be symmetrical, and **could** theoretically **escalate to include a military one**.

**Uncertainty regarding cyber law causes quick miscalc---escalates outside the cyber domain**

**Goodman 18**

Ryan The Anne and Joel Ehrenkranz Professor of Law at New York University School of Law. He served as Special Counsel to the General Counsel of the Department of Defense (2015-16). He is also a Professor of Politics and Professor of Sociology at NYU. “Cyber Operations and the U.S. Definition of “Armed Attack”” Just Security. 03-08-2018. https://www.justsecurity.org/53495/cyber-operations-u-s-definition-armed-attack/

A widely accepted view of the UN Charter is that a State can use force in self-defense only in response to an “armed attack,” which is importantly defined as the gravest forms of force in scale and effects. In contrast, the United States has long maintained that a State can use force in self-defense in response to any amount of force by another State. The U.S. view might have worked well when it came to bombs and battleships. There are reasons, however, to think that the application of the U.S. view in the cyber realm may risk **unintended, accidental, and unnecessary militarized conflicts.** That’s partly because of the **uncertainty of the law in cyberspace** and partly because of the uncertainty of facts when cyber operations occur. The U.S. position, one might think, reduces the overall risk of militarized conflicts between States. One reason to recommend the U.S. view is that it might enable a government to prevent escalation—for example by using cyber-ops to impede another State’s test missiles—in response to the latter’s low-level uses of force, and thus buy more time for diplomacy to avoid a larger battle. What’s more, if a State’s hands are tied such that it cannot use force to respond to a low-level use of force by an aggressor, it will put pressure on governments to expand what is meant by an “armed attack,” which has potentially dangerous precedential effects in the future. Those concerns, however, may not be as relevant for the United States, which, above and beyond other States, has a broader range of potential diplomatic, economic, and other non-forcible, non-military means to defend its interests. More important is deterrence. In favor of the U.S. view of the law is that a lower threshold for triggering the right of self-defense can deter aggressors from acting in the first place. In terms of defensive posture, the United States deters others who know that the American military can use its mighty arsenal in response to any illegal use of force. That empirical claim, however, is **weaker** in a world in which States very **frequently engage in low-level uses of force in cyber**, or might be thought to have done so by their adversaries. In that world, many States will have the legal right to use force in self-defense against others on an ongoing basis. Also, consider the U.S. offensive posture. The greater extent to which the United States, in particular, is engaged in cyber activities across the world that will be considered a use of force by other States, the greater license the United States may be handing those States to use force—whether in the cyber or kinetic realm—in response. That is, if those States adopt a view similar to the United States that “the inherent right of self-defense potentially applies against any illegal use of force.” It may have been more satisfying to the United States to operate in world in which it maintained the legal prerogative to adopt a forcible response in reaction to any illegal use of force while other States did not maintain that position. Our legal world may be changing, however. Witness, for example, Japan’s recent shifts toward the U.S. position. Taken in light of Mutual Defense Agreements, in which the United States has accepted an obligation to support other States who have been subject to an “armed attack,” and the kinds of calculations of what makes the world safer and better protects U.S. national security must surely shift. More specifically, if more U.S. allies start moving toward the U.S. view of “armed attack,” the United States may be drawn into far-flung cyber conflicts as an unintended consequence. Now add to this mix the legal uncertainties that exist in this specific area of cyber law. The **legal definition** of what exactly is a use of force in the cyber realm is **far less settled** than in the kinetic realm. What’s more, it is safe to assume that several States around the world are frequently engaging in actions that others might consider a use of force. Is the laying of specific types of malware on the systems of another State in preparation for possible future activation analogous to laying landmines in another State’s territory? The Tallinn Manual’s definition of cyberattacks (at least in the context of jus in bello) may lead one to think so, but widespread State practice would appear to contradict that conclusion. So which is it? Also, could the alteration or destruction of data count as a use of force or attack? This is an area where views are developing in one direction, but what happens in the limbo period between now and then, when some States and legal authorities hold one view and others hold different ones? That seems like a dangerous period for calibrating the use of force in cyber. And those are just two examples of legal uncertainties out of many that one could describe. These types of legal uncertainties are compounded by factual uncertainties in the cyber realm. While the United States appears to have an increasingly impressive ability to determine attribution, many other States lack that sophistication and are thus more likely to make costly errors. State D may mistake a cyber operation launched by a rogue hacker or organized non-State group operating out of country Y as being perpetrated by State Y itself. And governmental or non-governmental cyber hackers in a third country may very purposefully make it look like State Y conducted a cyberattack. Another difficulty in the cyber realm is determining whether certain effects of a hostile cyber operation were intended by the attacker. For example, State D may detect an imminent threat of malware in its systems that appears would at least temporarily compromise its most sensitive military arsenal—but is that what the perpetrator intended (and how, as a legal issue, should that question of intentionality matter)? In cyberspace, many of these actions and interactions will **take place at greater speeds** thanks, in part, to artificial intelligence. These conditions may **shrink the window of time** for political and military leaders to make decisions, and **place pressure on them to pre-authorize** or create automated responses. It is not hard to imagine tit-**for-tat uses of force quickly ascending a ladder of escalation.** And there is no legal reason the rungs of that ladder will remain **confined to the cyber realm.**

**Cyber miscalculations cause nuclear war---extinction**

**Moniz & Nunn 18**

Ernest Sam Ernest Moniz, the former US secretary of energy, and Sam Nunn, a former US senator, are co-chairmen of the Nuclear Threat Initiative. “Cyber attacks and rising risks of an accidental nuclear war” 02-03-2018. https://www.straitstimes.com/opinion/cyber-attacks-and-rising-risks-of-an-accidental-nuclear-war

The world has crossed over to a new nuclear era in which a fateful error, rather than intentional aggression, is the **most likely catalyst to nuclear catastrophe.** American leaders have been warned more than once of incoming Russian missiles - in each case, it was a false alarm resulting from technical or human error. Former Russian president Boris Yeltsin was mistakenly alerted to a possible United States missile strike after the launch of a Norwegian scientific rocket. After every incident, we deceive ourselves that we can solve the problem with better technology and training, or we reassure ourselves that the combination of diligence and good luck we experienced during the Cold War will continue. But do we really believe we can prevent a nuclear catastrophe indefinitely in a world that has nine states with nuclear weapons and significant suspicion and hostility in many of their mutual relationships? The risks of human error involving nuclear weapons are compounded by the potential for deliberate **cyberthreats to warning and command-and-control systems.** Hackers could insert a **false warning of a nuclear attack** into national warning and alert systems and falsely attribute that attack to an innocent country. At a time of heightened global tensions, with **too little communication or cooperation between nuclear rivals** and only **minutes of decision time**, how would leaders of states with nuclear weapons respond? The Trump administration recently **declared plans to broaden the role of nuclear weapons** in national defences beyond deterring nuclear attacks on the United States and its allies. Its new National Security Strategy states that the arsenal is now "essential" to preventing not just a nuclear attack but also "non-nuclear strategic attacks, and large-scale conventional aggression". A leaked draft of its forthcoming Nuclear Posture Review has similar language. Expanding the range of threats against which nuclear weapons might be used - which implies, for example, "strategic" cyber attacks - will greatly increase the risks of miscalculation or blunder. If a cyber attack took out a major part of our electrical grid, would we be able to quickly and confidently identify the attacking country? If Russia, China, India, Pakistan and others adopt similar policies, are we moving down a path where nuclear use becomes highly probable? Every country with nuclear weapons perceives its geopolitical circumstances differently, but we all face substantially increasing nuclear risks. Every country with nuclear weapons perceives its geopolitical circumstances differently, but we all face **substantially increasing nuclear risks.** Individually, where necessary, and together where possible, they must move with urgency on policies that can reduce these risks for all nations.

**Cyber defense doesn’t apply – Doesn’t assume AI – increases in fragmented AI responses will *INEVITABLY* trigger a *PHYSICAL ATTACK*. Only regulated AI can solve.**

* Regulated AI is key to cyber defense

**Taddeo & Floridi 18**

NATURE | VOL 556 | 19 APRIL 2018, Mariarosaria Taddeo is a research fellow and deputy director of the Digital Ethics Lab at the Oxford Internet Institute, University of Oxford, UK; and a Turing fellow of the Alan Turing Institute, London, UK. Luciano Floridi is professor of philosophy and ethics of information at the University of Oxford, UK; director of the Digital Ethics Lab at the Oxford Internet Institute; and chair of the Data Ethics Group at the Alan Turing Institute. “Regulate artificial intelligence to avert cyber arms race”, <https://media.nature.com/original/magazine-assets/d41586-018-04602-6/d41586-018-04602-6.pdfv> --ECM

Cyberattacks are **becoming more frequent, sophisticated and destructive**. Each day in 2017, the United States suffered, **on average**, **more than 4,000** ransomware attacks, which encrypt computer files until the owner pays to release them1 . In 2015, the daily average was just 1,000. In May last year, when the WannaCry virus crippled hundreds of IT systems across the UK National Health Service, more than 19,000 appointments were cancelled. A month later, the NotPetya ransomware cost pharmaceutical giant Merck, shipping firm Maersk and logistics company FedEx around US$300 million each. Global damages from cyberattacks totalled $5 billion in 2017 and may reach $6 trillion a year by 2021 (see go.nature.com/2gncsyg).

Countries are partly behind this rise. They use cyberattacks both offensively and defensively. For example, North Korea has been linked to WannaCry, and Russia to NotPetya.

As the threats escalate, so do defence tactics. Since 2012, the United States has used ‘active’ cyber defence strategies, in which computer experts neutralize or distract viruses with decoy targets, or break into a hacker’s computer to delete data or destroy the system. In 2016, the United Kingdom announced a 5-year, £1.9-billion (US$2.7-billion) plan to combat cyber threats. NATO also began drafting principles for active cyberdefence, to be agreed by 2019. **The U**nited **S**tates and the United Kingdom **are leading this initiative**. Denmark, Germany, the Netherlands, Norway and Spain are also involved (see go.nature.com/2hebxnt).

Artificial intelligence (AI) is poised to revolutionize this activity. **Attacks and responses** will become faster, more precise and more disruptive. **Threats will be dealt with in hours**, not days or weeks. AI is already being used to verify code and identify bugs and vulnerabilities. For example, in April 2017, the software firm DarkTrace in Cambridge, UK, launched Antigena, which uses machine learning to spot abnormal behaviour on an IT network, shut down communications to that part of the system and issue an alert. The value of AI in cybersecurity was $1 billion in 2016 and is predicted to reach $18 billion by 2023 (ref. 2).

By the end of this decade, many countries plan to deploy AI for national cyberdefence; for example, the United States has been evaluating the use of autonomous defence systems and is expected to issue a report on its strategy next month3 . **AI makes deterrence possible because attacks can be punished** 4. Algorithms can identify the source and neutralize it without having to identify the actor behind it. Currently, countries hesitate to push back because they are unsure who is responsible, given that campaigns may be waged through third-party computers and often use common software.

**The risk is a cyber arms race** 5. As states use increasingly **aggressive AI-driven strategies**, opponents **will respond** ever more fiercely. **Such a vicious cycle might lead ultimately to a physical attack**.

Cyberspace is a domain of **warfare**, and AI is a new defence capability. **Regulations are thus necessary for state use** of AI, as they are for other **military domains** — air, sea, land and space 6. Criteria are needed to determine proportional responses, as well as to set clear thresholds or ‘**red lines**’ for distinguishing legal and illegal cyberattacks, and to apply appropriate sanctions for illegal acts7 . In each case, unilateral approaches will be ineffective. Rather, an international doctrine must be defined for state action in cyberspace. Alarmingly, international **efforts to regulate cyber conflicts have stalled**.

**Advantage ( ): Heg**

**The SQ is unsustainable – maintain AI advantages requires alliance buy in. Absent adaption China fills in.**

**Sullivan** 10/4/20**21**

Ryan Sullivan Army pilot studied at the prestigious Fudan University in Shanghai, China, as an Olmsted Scholar graduate-level work in the field of Artificial Intelligence to deliver an in-depth study of the critical elements of U.S.-China competition in Artificial Intelligence, “The U.S., China, and Artificial Intelligence Competition Factors”, <https://www.airuniversity.af.edu/Portals/10/CASI/documents/Research/Cyber/2021-10-04%20US%20China%20AI%20Competition%20Factors.pdf?ver=KBcxNomlMXM86FnIuuvNEw%3D%3D> – ECM

The paper assesses that the U.S. is well-positioned to maintain competitive advantage with China in the AI domain. **However**, American advantage hinges on forming flexible and overlapping **alliances based on values** and committing the required domestic resources **to address legitimate national concerns** over science-technology engineering-math (STEM) education, gaps in domestic manufacturing, obstacles to attracting foreign talent, and ethical concerns over data AI application. If the U.S. does not adapt in these areas, **China can quickly narrow the AI gap**. Moreover, while the U.S. and China remain the two nations best positioned to benefit from increased adoption of AI across society, this paper concludes that their competition is not just binary for it exists within **concentric circles of overlapping international partnerships and agreements**. Such an environment is as malleable as it is uncertain for the international community today as all governments struggle with challenges over data privacy, the role of AI-empowered multinational companies, and critical choke points in supply chains that impact the AI industry and threaten national security interests. The importance of global trade, the dual-use nature of AI, and the emergence of technology clusters and critical supply components outside of the U.S., illustrate the complex web that both the U.S. and China must navigate to extend influence to pursue desired objectives with AI.

The monograph establishes that **without allies and partners**, American AI growth, high technology innovation, and productive economic development **will stagnate** as many nations address the complexities of data sharing in a world where China will cast an enormous shadow. **Coop**erating **with any nation that shares similar values with the U.S. is essential** for expanding the scope and scale of coordination on AI in existing multilateral institutions and new organizations very likely to form in response to AI’s increasingly important impact throughout society. If liberal democracies **do not establish norms and standards for AI, then China will fill the vacuum**. While many view techno-democratic alliances as the best solution for enabling durable AI norms and standards, one must not lose sight of the fact that national interests will not always align, even among liberal democratic allies. After the establishment of a firm base of **support for agreeable AI procedures among nations** with shared values and norms, the next step should be an outreach to nations with “illiberal values,” thus incrementally including them by design. Only after these steps toward a robust collective of like-minded nations might greater collaboration and cooperation with China on AI standards, norms and institutions make sense.

**China victory in AI risk overturning unipolarity – AI is the *KEY* internal link between unipolarity and multipolarity. That EXPANDS the risk international competition and instability.**

**Sullivan** 10/4/20**21**

Ryan Sullivan Army pilot studied at the prestigious Fudan University in Shanghai, China, as an Olmsted Scholar graduate-level work in the field of Artificial Intelligence to deliver an in-depth study of the critical elements of U.S.-China competition in Artificial Intelligence, “The U.S., China, and Artificial Intelligence Competition Factors”, <https://www.airuniversity.af.edu/Portals/10/CASI/documents/Research/Cyber/2021-10-04%20US%20China%20AI%20Competition%20Factors.pdf?ver=KBcxNomlMXM86FnIuuvNEw%3D%3D> – ECM

Henry Kissinger once wrote that “the stability of any international system ultimately relies on what he termed ‘generally accepted legitimacy.”371 Any international framework needs buy-in from the powers within it”, **and the U.S. must play a central role** in shaping the AI world order.372 This chapter focuses on AI competition between the U.S. and China for legitimacy to lead efforts “conforming to recognized principles or accepted rules and standards.”373 The international contest over global leadership occurs when China’s rise challenges U.S. hegemony in a liberal world order created without participation from the CCP. AI and other emerging technologies **will disrupt traditional measures of power**. While the U.S. and China will remain the strongest poles, the emerging world order will be more **multipolar** than bipolar in design, as AI enables regional powers to seek greater input over norms and standards.374 China perceives and **desires multipolarity to limit U.S. power** and influence to the degree that the U.S.’s preferred values and political institutions are not dictated to others. While some rush to make comparisons to the Cold War or the space race, a CNAS report suggests that “competition in the AI arena could be even more **intense**. The space race was fundamentally a bipolar competition – a subset of the broader Cold War... Competition in AI, on the other hand, **may be much more intense because it will be much more multipolar and multisector**.”375 This chapter focuses on AI competition in an increasingly multipolar world structure where values and influence with rising middle powers and developing nations “lend authority or respectability” to a nation’s leadership position on AI.376 However, for China, there is a domestic element of legitimacy competition related to Sino-American values competition in the first chapter of this monograph. For China, legitimacy also addresses the CCP’s concern over maintaining domestic legitimacy as the sole power in a single-party system. The CCP’s domestic problems reflect legitimacy in terms of “popular acceptance of a government, political regime or system of governance.”377 This definition highlights an area where competition over legitimacy and values overlap and should be understood by readers when viewing China’s actions in the global setting. There are two audiences for the CCP, the international community, and its domestic base, who want to see an emergent China take on a larger leadership role.

This global leadership focus aligns with one of the NSCAI’s National Technology Strategy’s key pillars, which calls for the U.S. to lead a “favorable international AI order.”378 China views actions over norms and standards as those of a technological hegemon. Fudan’s Cai Cuihong believes that the U.S.’ excessive pursuit of technological hegemony will result in a weakened superpower that cannot effectively compete, disrupted global markets and supply chains, a loss of “trust and soft power as a source of legitimacy,” and weakened efforts to form technical alliances of support.379 Written in 2019, Cai’s article addresses many of the emerging challenges that face both the U.S. and China, and she claims that China will never pursue technological hegemony. Nevertheless, leadership in developing AI norms, rules, and strategies for the new world order is more likely to occur in a multiparticipant setting where the U.S. and China lead factions but must rely on the support of other nations to achieved desired ends. As the CSG points out, “The successful adoption of AI in adjacent fields and technologies will drive economies, shape societies, and determine which states exert influence and exercise power in the world. Many countries have national AI strategies. However, only the United States and China have the resources, commercial might, talent pool, and innovation ecosystem to lead the world in AI.”380 AI will serve as a great enabler, and this paper aligns with the CSG in putting forth the argument that AI will emerge as a tool for other states to have a voice and punch above their weight in both regional and global settings. **Influencing those nations and relying on a shared values approach is essential for the U.S. to gain a competitive edge over China**.

**That makes war inevitable. Collapse of US Heg means the no allies comes to the US aide.**

**Ataman** 9/29/20**21**

Prof. Muhittin Ataman graduated from the Faculty of Political Science in the Department of International Relations at Ankara University. “Global leadership crisis: The U.S. hegemony vs. China”, <https://www.dailysabah.com/opinion/columns/global-leadership-crisis-the-us-hegemony-vs-china> -- ECM

Therefore, it can easily be assumed that the Chinese challenge for global hegemony is in the making. The only reason why China **has not claimed global heg**emony **is timing**. In other words, according to the Chinese leadership, **China is not yet ready for global hegemony**. When China begins to involve itself **in the political** and economic **affairs of other countries and steer them away from the U.S.**, **a global confrontation will become inevitable**. At that time, the U.S. is not sure how many countries will continue to remain on its side. Many European countries may remain indifferent to a possible confrontation between the U.S. and China in the Indo-Pacific region.

**The US will try to defend it inevitably – decline causes war**

**Beckley 15**

(Michael Beckley is a research fellow in the International Security Program at Harvard Kennedy School’s Belfer Center for Science and Internatio nal Affairs., “The Myth of Entangling Alliances Michael Beckley Reassessing the Security Risks of U.S. Defense Pacts”, <http://live.belfercenter.org/files/IS3904_pp007-048.pdf>)

The finding that U.S. entanglement is rare **has important implications for international relations scholarship** and U.S. foreign policy. For scholars, **it casts doubt on classic theories of imperial overstretch** in which great powers exhaust their resources by accumulating allies that free ride on their protection and embroil them in military quagmires.22 The U.S. experience instead suggests that **great powers can dictate the terms of their security commitments and that allies often help their great power protectors avoid strategic overextension.** For policy, the rarity of U.S. entanglement suggests that the United States’ current grand strategy of deep engagement, which is centered on a network of standing alliances, does not preclude, and may even facilitate, U.S. **military restraint**. Since 1945 the United States has been, by some measures, the most militarily active state in the world. The most egregious cases of U.S. overreach, however, **have stemmed not from entangling** alliances, but from the penchant of American leaders **to define national interests expansively**, to overestimate the magnitude of foreign threats, and to underestimate the costs of military intervention. Scrapping alliances will not correct these bad habits. In fact, disengaging from alliances may unleash the **U**nited **S**tates **to intervene recklessly** abroad while **leaving it without partners** to share the burden **when those interventions go awry**.

**That ensures – global conflicts, warming, water wars, and pandemics.**

**Beckley 12**

Michael Assistant professor of political science at Tufts. “China’s Century? Why America’s Edge Will Endure.” International Security 36(3): 41-78.

One danger is that **declinism** could prompt **trade conflicts** and **immigration restrictions**. The results of this study suggest that the **U**nited **S**tates benefits immensely from the free flow of goods, services, and people around the globe; this is what allows American corporations to specialize in high-value activities, exploit innovations created elsewhere, and lure the brightest minds to the United States, all while reducing the price of goods for U.S. consumers. Characterizing China’s export expansion as a loss for the United States is not just bad economics; it blazes a trail for **jingoistic** and **protectionist policies**. It would be tragically ironic if Americans reacted to **false prophecies** of decline by cutting themselves off from a potentially vital source of American power.

Another danger is that declinism may impair foreign policy decisionmaking. If top government officials come to believe that China is overtaking the **U**nited **S**tates, they are **likely to react** in one of two ways, both of which are potentially **disastrous**.

The first is that policymakers may imagine the **U**nited **S**tates faces a **closing “window of opportunity”** and should **take action** “while it still enjoys preponderance and not wait until the diffusion of power has already made international politics more competitive and unpredictable.”158 This belief may spur positive action, but it also invites **parochial thinking**, **reckless behavior**, and **preventive war**.159 As Robert Gilpin and others have shown, “**[H]egemonic struggles** have **most frequently** been triggered by **fears of ultimate decline** and the **perceived erosion of power**.”160 By **fanning such fears**, declinists may **inadvertently promote** the type of **violent overreaction** that they seek to prevent.

The other potential reaction is retrenchment—the divestment of all foreign policy obligations save those linked to vital interests, defined in a narrow and national manner. Advocates of retrenchment **assume**, or **hope**, that the world will sort itself out on its own; that whatever replaces American hegemony, whether it be a return to balance of power politics or a transition to a postpower paradise, will naturally maintain international order and prosperity.

**Order** and **prosperity**, however, are **unnatural**. They can **never be presumed**. When achieved, they are the **result** of determined action by **powerful actors** and, in particular, by the most powerful actor, which is, and will be for some time, the **U**nited **S**tates. **Arms buildups**, **insecure sea-lanes**, and **closed markets** are only the most **obvious risks** of U.S. retrenchment. Less obvious are **transnational problems**, such as **global warming**, **water scarcity**, and **disease**, which may **fester without a leader to rally collective action**.

Hegemony, of course, carries its own risks and costs. In particular, America’s global military presence **might** tempt policymakers to use force when they should choose diplomacy or inaction. If the **U**nited **S**tates abuses its power, **however**, it is **not because it is too engaged** with the world, but because its engagement lacks strategic vision. The solution is **better strategy**, **not retrenchment**.

The **first step** toward sound strategy is to recognize that the status quo for the United States is pretty good: it does not face a hegemonic rival, and the trends favor continued U.S. dominance. The **overarching goal** of American foreign policy should be to **preserve this state of affairs**. **Declinists** claim the **U**nited **S**tates should “adopt a neomercantilist international economic policy” and “**disengage** from current alliance commitments in East Asia and Europe.”161 But the fact that the **U**nited **S**tates rose relative to China while propping up the world economy and maintaining a hegemonic presence abroad casts doubt on the wisdom of such calls for radical policy change.

**And the US loses! DIB weakness cements US collapse.**

**Harper 20**

(Jon Harper Has a Masters Degree in National Foreign Studies from Georgetown—Received Bachelors Degree at Yale in History. He is the Managing Editor for National Defense Magazine. https://www.nationaldefensemagazine.org/articles/2020/1/24/industrial-base-could-struggle-to-surge-production-in-wartime /) A$

The **U.S. industrial base would be challenged to ramp up production to meet wartime requirements in the event of a protracted great power conflict**, analysts and Pentagon officials say. The National Defense Industrial Association’s new report, “Vital Signs: The Health and Readiness of the Defense Industrial Base,” said 27 percent of **critical defense supplier industries would likely experience shortages in the event of a surge in demand for combat-essential products.** (See story) That finding is of particular concern in the new strategic environment. In the decades following the Cold War, the United States was focused on regional wars such as Iraq and Afghanistan, noted Mark Cancian, senior adviser at the Center for Strategic and International Studies. “For the most part, losses [of equipment] have been low and your existing industrial base could handle it,” he said. But in recent years “the **focus changed** **to great power conflict with China and Russia**, and in **such a conflict attrition** might be **very high** and the **industrial base is not designed to handle that kind of demand**” for more systems. Susannna Blume, director of defense programs at the Center for a New American Security, noted that **China has been** **investing heavily** in its missile forces. “Those forces are designed to cripple the U.S. military,” she said. “That’s a huge concern. **The ability to reconstitute quickly could be critical in prevailing in that kind of conflict**.” Cancian said that, based on historical analysis of attrition rates in large conventional wars, the U.S. **Army could be reduced to just two armored brigades in the first nine months of a fight against another great power. Similar rates of attrition would be expected to be sustained by aircraft and other major systems,** he added. The Defense Department would struggle to replace losses or expand its force structure in such a scenario, analysts say. “**The industrial base has been designed to produce equipment in peace time as efficiently as possible**, so much of the spare capacity has been squeezed out in order to reduce costs,” Cancian said. “It is not a worthwhile business strategy to have a lot of unused capacity, and DoD has not been willing to pay for it.” Maiya Clark, a research assistant at the Heritage Foundation’s Center for National Defense, said **the capacity problem is widespread**. “Generally speaking, I would say that the U.S. defense industrial base really is poorly positioned for a production surge at this time,” she said. “We’re barely meeting the needs of our military in peace time. So it’s definitely a great concern in pretty much every sector, although depending on the sector, the particular issues are different.” Cancian said replacing destroyed or damaged ships would be especially challenging because it takes years to construct major battle force vessels such as destroyers or aircraft carriers. Clark said another issue is the shortage of skilled technical labor for people who have the training to do specialized tasks such as welding and electrical work. The limited number of vendors is another problem, noted the Defense Department’s 2018 report titled, “Assessing and Strengthening the Manufacturing and Defense Industrial Base and Supply Chain Resiliency.” The document is often referred to as the 13806 Report after the executive order that led to it. Today, the U.S. shipbuilding industrial base consists primarily of seven shipyards owned by four companies, plus their suppliers, the report noted. **The number of vendors supplying specific types of platforms is even fewer.** For example, **only one firm — Huntington Ingalls Industries — currently builds aircraft carriers**. “In the case of a surge, we would be really poorly placed to increase our production capacity,” Clark said. The aircraft manufacturing sector faces similar workforce and supplier base issues. Six companies provide the majority of platforms and possess the full range of capabilities to bring a new weapon system from the research, design and development phases into full production, according to the 13806 Report. The big three — **Boeing, Lockheed Martin and Northrop Grumman— have a virtual monopoly in many areas,** Clark noted. For example, Northrop Grumman is the only firm currently building bombers. Industry consolidation across a number of sectors is already an issue that would only be exacerbated during a great power war, Clark noted. “These are all problems that we can see now … but if there were to be a surge required, all those problems would become massively obvious.” Vehicle manufacturing is one sector where the industrial base has recently demonstrated an ability to ramp up production to meet urgent wartime requirements. During the Iraq and Afghanistan wars, improvised explosive devices wreaked havoc on U.S. forces. In response, the Pentagon contracted for thousands of mine resistant, ambush-protected vehicles to transport troops around the battlefield. Production increased from 82 trucks per month in June 2007, to 1,300 a month in December of that year, Clark said. “That was a pretty massive surge that we managed successfully,” she said. “We had multiple manufacturers involved with that effort and ended up producing around 24,000 vehicles.” However, other platforms wouldn’t be as easy to churn out, Cancian noted. “If we were in a great power conflict with heavy attrition, we would surge all of the tank production that we could, but of course that’s not going to be able to replace most” of the losses, he said. Technologies that are also produced in the civilian sector will be less of a problem to replace such as small arms, trucks and some types of communication systems, he said. “It’s those **areas that are uniquely military where there’s no civilian analogue that will be most vulnerable**.” **Munitions** production **is another area for concern**. Advanced air-, ground- and sea-launched weapons are a key component of the military’s operating concepts. In the Trump administration’s fiscal year 2020 budget request, the Defense Department proposed buying several critical munitions at maximum production rates, Blume noted. “If we are maxing our production capacity in peace time for critical munitions, what does that say for our ability to produce those munitions in a moment where we could be expending many, many, many of them very, very rapidly?” Blume asked. Cancian said **the United States can’t count on replicating the production successes it accomplished during the last great power conflict when civilian industry was converted to military manufacturing**. “In World War II we had several years to get ready before we actually got involved in the fighting. And even once we got involved in the fighting, we had several years before we went toe-to-toe with the main forces of our opponents,” he said. “During that time it was our allies for the most part who were holding the line, and we won’t have that luxury in a future conflict.” The U.S. **economy has also changed significantly** since the 1930s and 1940s, and is now much more oriented toward services than manufacturing, he noted. Blume said **defense equipment is** also **more specialized in the 21st century. “In World War II you had major industrial conglomerates like Ford producing war material**. They were making tanks and there was a lot of … industrial capacity in the United States that could be thrown towards the war effort,” she said. “The composition of the **defense industrial base is not the same today**. You tend to have more highly specialized defense companies … and there just aren’t that many of them.” Cancian said China and Russia would also face challenges replacing equipment and growing their forces during a war with the United States. But they might not be in as tough a spot. “The **Chinese have, I think, a much larger military industrial base and they’re producing more weapons than the United States**,” he said. “So they might have an advantage there.” **Russia, meanwhile, might have larger quantities of older equipment in storage that it could draw from**, he added. However, there are a number of steps that the U.S. government can take now to ameliorate the surge problem, analysts say. One is to ensure that the Defense Department has sustained and consistent funding. Budget instability, including a series of continuing resolutions and threats of government shutdowns in recent years, have hurt the industrial base and driven away suppliers, Clark noted. Multi-year contracts would also help to establish predictable funding, she said. “Without that reliability, these companies end up shutting their doors, they end up consolidating and our capacity to meet current and potentially larger future needs is compromised,” Clark said. While sole-source risk can occur at the prime level, it more often manifests itself at the sub-tier, the 13806 Report noted. Clark said: “There’s just a lot of different examples where these **little companies are very adversely affected** by the unpredictability of DoD funding. It may look like a little company, but it **can have drastic results for U.S. national security**.” Cancian said it would be prudent to identify and address the most severe bottlenecks in industry so that production in wartime could be increased as much as possible. Targeted investments could have an outsized impact on the ability to surge. Clark noted that the government could provide funding to selected industries that are in jeopardy under authorities provided in the Defense Production Act. (See story) For planning purposes, the Pentagon should determine what surge production capabilities would be needed in a global war with China or Russia, and where the shortfalls are, Clark said. “You need to know … which holes need to be plugged first,” she said. “The information that we have that would lead us to draw conclusions about our surge capacity would lead us to say we’re not all that prepared, but actually the degree to which we are prepared or unprepared is hard to know without more information.” Tom Spoehr, director of Heritage’s Center for National Defense, said more government visibility into industry’s resourcing needs would also be helpful. Using contracting to elicit that information would be one option. “If we’re contracting for a hundred planes a year, the contractor … [could be required to] advise the government what resources are required to get to 200 a year or something like that,” he said. “Right now that’s not part of it, and so everybody’s kind of flying blind on this topic.” The Pentagon will need to give companies financial incentives if it wants them to boost their production capacity, he noted. Firms are focused on maximizing shareholder value and profit, and maintaining extra facilities is generally looked upon as wasteful in that context. “Companies will not typically maintain one iota of additional capacity more than what they’ve been contracted or can foreseeably need in the next couple of years,” he said. Blume said new manufacturing techniques could enhance industry’s capabilities. Assistant Secretary of the Air Force for Acquisition, Technology and Logistics Will Roper is pushing a new Digital Century Series concept that calls for using digital design and engineering to improve the way aircraft are produced, she noted. “If he’s right and there is a way to build airplanes, for example, without a lot of heavy, highly specialized tooling or skilled labor, that has significant implications for … the ability to restart or expand production capacity faster,” Blume said. The Defense Department can invest and push for industry to embrace the kinds of technologies that will make it easier to surge, she added. “It’s not as though the only solution to this problem is just building more factories and letting them sit unproductive,” Blume said. “You can design weapons systems in a way such that they can be built more quickly and more easily using technologies like digital [engineering], etc.” **Cancian said if the balloon goes up and the U.S. military finds itself in a shooting war with China or Russia, it might have to buy foreign systems or take older, less capable systems out of storage to help replace equipment losses.** It **would also .** Meanwhile, Pentagon officials are well aware of many challenges the nation would face trying to execute a wartime surge. “I have a lot of concerns,” Assistant Secretary of Defense for Acquisition Kevin Fahey told reporters recently. “But the other thing I’d tell you is industry never ceases to amaze … when you end up with a requirement that is funded, how quickly they can ramp up.” Fahey noted that he played a role in the effort to surge mine resistant, ambush-protected vehicle production. However, the MRAP was basically just “a really big truck,” he said. **Other types of equipment surges would be more difficult.** For example, “we already have bottlenecks given what we’ve got at the shipyards,” he said. “If you wanted to ramp our production [that] would be harder to do.” It wouldn’t be impossible, but it would “probably take a little bit of time,” he added. The Trump administration is trying to tackle the issues that were highlighted in the 13806 Report, including surge capacity and supply chain vulnerabilities, he said. “We did a great job of actually for the first time … not only identifying what we believe our problems were in the industrial base, but what were we going to do about it,” he said. “We have a lot of executive orders to actually work on some of these major problems.”

**Advantage ( ): US-China Coop**

**AI usage is inevitable its only question of what rules will be used to govern it. Unregulated AI risk global misuse and could easily be weaponized by rogue actors – Even a 1% risk of the ADV is untenable.**

**Haenel 18**

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Multiple arguments for the rapid development of **A**rtificial **I**ntelligence outpace any skepticism towards the fledgling technology, their pressing nature however **showcases the necessity to do so safely**. First, delaying the advancement of a technology that could help to solve contemporary and future social and scientific problems, e.g. by increasing the efficiency of energy consumption or outright help to invent entirely new methods and materials to produce sustainable energy, or by reducing traffic through automatic and interconnected private and public transportation systems, carries a high opportunity cost to delay these achievements to occur later, or never, rather than sooner.43 This becomes even more apparent if we consider the AI-assisted scientific breakthroughs such as in medicine where machines already outperform certified and experienced doctors in detecting selected diseases accurately to the benefits o the patients.44 Second, **stalling investments** in research and development of AI by individual powerful actors will only give **advantage to a competing state** or corporation which is willing to fund and pioneer the technology. Reasons to delay include the monetary costs o innovating a field dependent on highly-skilled labor and benefiting most rom an academic and industry in restructure that is locally accessible, or the lack o conviction of its use in the near future among term- or profit-constrained government and business leadership.

These contradictions reveal a striking paradox of the technology’s geopolitical quality: Similar to the development and manipulation of nuclear power in the 1940s, succeeding first in realizing powerful AI capable of prioritizing the economic or strategic interests of its developers **will reset the political spheres of interests globally**, and thus now has captured the attention of regional and global political and economic powers. **However**, newly developed software can also **be much more easily misused by rogue actors than nuclear weapons** because of its **decentralized, inexpensive accessibility**, and any further delay in developing AI robustly could **invite “bad actors”** such as **states, terrorist groups**, or corporations to exploit it unilaterally.

Research on AI safety thus is necessary to “help maximize the societal benefit of AI,” both to ensure that the technology is utilized to ease and enrich human lives while it caters to the political and economic interests driving its adoption forward notwithstanding the paramount importance to guarantee that “AI systems must do what [humans] want them to do.”45 Among experts it is taken or granted that its industrial development will be progressed by capital investments ignorant of policy adjustments, thus theoretical and practical research is needed to better understand “the nature, risks, and overall outcomes” and safeguard specific and general AI applications.46 These concerns are nourished by the logical assumption, borrowing from earlier explanations why not to anthropomorphize machines, that enabling a machine to automatically re-program itself would lead to the departure of its original programming within the rules set or its auto-improvement by the original programmers. Russel argues that these **rules mark the critical juncture between developing AI safely or ailing to do so** because of the virtually infinite density of the rules’ consequences on the machines’ future actions.

Bostrom illustrates this with an anecdote of tasking an intelligent machine with generating as many paperclips as possible to ease a supply shortage.48 However, the wording includes not a finite number of clips or how it should and should not achieve its goal. Thus, besides collecting them individually, trading them or money generated from profits earned in other capacities, the AI will eventually seek to control the manufacturing of paperclips itself .49 To maximize its utility function the goal-seeking AI soon will put such factories across all available space on Earth, effectively eradicating any habitable space and with it all life on the planet. The machine carried out its goals within the rules sets by its human developers without knowing how many clips are enough, or whether sustaining life is more important than creating paperclips.50 Researching how to safely align such most critical human interests with binary operations is integral to the robust development of **A**rtificial **I**ntelligence, rendering this research “**the essential task of our age**”.

Safety advocates argue that “**whether the risk is 1 per cent, 80 per cent**, or anywhere in between” it seems **irresponsible not to take any precautions**.56

Besides, predicting the impossibility of any technology that has yet to be developed practically appears to be flawed: Ernest Rutherford, a respected physicist o his time, proclaimed at a dinner reception in September 1933 that “anyone who predicted energy could be derived rom the trans ormation o an atom ‘was talking moonshine.’ The very next day […] Leo Szilárd worked out conceptually how it could be done.”57 Szilárd’s discovery eventually led to the manipulation of nuclear power or civil and military purposes. In other words, a technology deemed inconceivable turned out to be the base of the most constructive and destructive force ever commanded by humans in the very next moment.

**Upside AND downside risks of AI are existential---effective governance is key**

**Tzimas 21**

Themistoklis, Aristotle University of Thessaloniki, Faculty of Law, “Chapter 2: The Expectations and Risks from AI,” Legal and Ethical Challenges of Artificial Intelligence from an International Law Perspective, Springer, 2021, pp. 9–32 Open WorldCat, <https://doi.org/10.1007/978-3-030-78585-7> – ECM

Therefore, it is only natural to be at least skeptical towards a future with entities possessing equal or superior intelligence and levels of autonomy; the prospect even of **existential risk** looms as **possible**.7

AI that will have reached or surpassed our level of intelligence make us wonder why would highly autonomous and intelligent AI want to give up control back to its original creators?8 Why remain contained in pre-deﬁned goals set for it by us, humans?

Even AI in its **current** form and narrow intelligence poses risks because of its **embedded-ness** in an ever-**growing number** of **crucial aspects of our lives**. The role of AI in **military**, ﬁnancial,9 health, educational, environmental, **governance networks**-among **others**—are areas where **risk** generated by AI—even **limited**— autonomy can be **diffused** through **non-linear networks**, with **signiﬁcant** impact— even **systemic**.10

The answer therefore to the question whether AI brings risk with it is yes; as Eliezer Yudkowski comments the greatest of them all is that people conclude too early that they understand it11 or that they assume that they can achieve it without necessarily having acquired complete and thorough understanding of what intelli- gence means.12

Our projection of our—lack of complete—understanding of the concept of intelligence on AI is owed to our lack of complete comprehension of human intelligence too, which is partially covered by the prevalent and until now self- obvious, anthropomorphism because of which we tend to identify higher intelligence with the human mind.

Yudkowski again however suggests that AI “refers to a vastly greater space of possibilities than does the term “Homo sapiens.” When we talk about “AIs” we are really talking about minds-in-general, or optimization processes in general. Imagine a map of mind design space. In one corner, a tiny little circle contains all humans; within a larger tiny circle containing all biological life; and all the rest of the huge map is the space of minds-in-general. The entire map ﬂoats in a still vaster space, the space of optimization processes.”13

Regardless of what our well-established ideas are, there are many, different intelligences and even more signiﬁcantly, there are potentially, different intelli- gences equally or even more evolved than human.

From such a perspective, the unprecedented—ness of potential AI developments and the mystery surrounding them emerges as not only the outcome of pop culture but of a radical transformation of our—until recently—self—obvious identiﬁcation of humanity with highly evolved and dominant intelligence.14

The **lack of understanding** of intelligence and therefore of AI may be **frightening** but **does not lead necessarily to regulation**—at least to a **proper** one. We could **even** be led into **mak**ing potentially **catastrophic choices**, on the basis of **false assumptions**.

On top of our lack of understanding, we should add a sentiment of **anxiety** as well as of expectations, which intensiﬁes as an atmosphere of emergency and of expected groundbreaking developments grows. The most graphic description of this feeling is the potential of a moment of singularity, as mentioned above according to the description by Vinge and Kurzweil.

As the mathematician I. J. Good–Alan Turing’s colleague in the team of the latter during World War II—has put it: “Let an ultraintelligent machine be deﬁned as a machine that can far surpass all the intellectual activities of any man however clever. Since the design of machines is one of these intellectual activities, an ultraintelligent machine could design even better machines; there would then unquestionably be an “intelligence explosion,” and the intelligence of man would be left far behind. Thus the ﬁrst ultraintelligent machine is the last invention that man need ever make, provided that the machine is docile enough to tell us how to keep it under control.”15 This is in a nutshell the moment of singularity.

The estimates currently foresee the emergence of ultra or super intelligence—as it is currently labelled—or in other words of singularity, somewhere between 20 and 50 years from today, further raising the sentiment of emergency.16 We cannot even foretell with precision how singularity would look like but we know that because of its expected groundbreaking impact, both states and private entities compete towards gaining the upper hand in the prospect of the singularity.17

Despite the fact that such predictions have been proven rather optimistic in the past18 and therefore up to some extent inaccurate, there are reasons to assume that their materialization will take place and that the urgency of regulation will be proven realistic.

After all, part of the disappointments from AI should be blamed on the fact that certain activities and standards, which were considered as epitomes of human intelligence have been surpassed by AI, only to indicate that they were not eventu- ally satisfactory thresholds for the surpassing of human intelligence.19 Partially because of AI progress we realize that human intelligence and its thresholds are much more complicated than assumed in the past.

The vastness’s of deﬁnitions of intelligence, as well as its etymological roots are enlightening of the difﬁculties: “to gather, to collect, to assemble or to choose, and to form an impression, thus leading one to ﬁnally understand, perceive, or know”.20

As with other relevant concepts, the truth is that until recently our main way to approach intelligence for far too long was “we know it, when we see it”. AI is an additional reason for looking deeper into intelligence and the more we examine it, the most complicated it seems.

The combination of lack of complete understanding of intelligence, the unpredictability of AI, its rapid evolution and the prospect of singularity explain both the fascination and the fear from AI. Once the latter emerges, we have no real knowledge about what will happen next but only speculations, which until recently belonged to the area of science ﬁction.

We are for example pretty conﬁdent that the speed of AI intelligence growth will accelerate, once self—improvement will have been achieved. The expected or possible chain of events will begin from AI capacity to re-write its own algorithms and exponentially self—improve, surpassing human intelligence, which lacks the capacity of such rapid self—improvement and setting its own goals.21

We can somehow guess the speed of AGI and ASI evolution and possibly some of its initial steps but we cannot guess the directions that such AI will choose to follow and the characteristics that it will demonstrate. Practically, we credibly guess the prospects of AI beyond a certain level of development.

Two **existential issues** could emerge: ﬁrst, an imbalance of intelligence at **our expense**—with us, humans becoming the inferior species—in favor of non-biological entities and secondly a lack of even fundamental conceptual communication between the two most intelligent “species”. Both of them heighten the fear of **irreversible changes**, once we lose the possession of the superior intelligence.22

However, we need to consider the **expectations as well**. The **positive side** focuses on the so-called **friendly** AI, meaning AI which will **beneﬁt** and **not harm** humans, thanks to its advanced intelligence.23

AI bears the promise of signiﬁcantly enhancing human life on various aspects, beginning from the already existing, narrow applications. The **enhance**d **automation**24 in the industry and the shift to **autonomy**,25 the take—over by AI of tasks even at the **service sector** which can be considered as “tedious”—i.e. in the banking sector—**climate** and **weather forecasting**, **disaster** response,26 the potentially better **coop**eration among different actors in complicated matters such as in matters of **information**, **geopolitics** and **i**nternational **r**elations, **logistics**, **resources** ex.27

The realization of the positive expectations depends up to some extent upon the **complementarity** or not, of AI with **human** intelligence. However, what friendly AI will bring in our societies constitutes a matter of debate, given our lack of unanimous approach on what should be considered as beneﬁcial and therefore friendly to humans—as is analyzed in the next chapter.

Friendly AI for example bears the prospect of freeing us from hard labor or even further from **unwanted** labor; of generating further economic **growth**; of dealing in unbiased, speedy, effective and cheaper ways with sectors such as **policing**, **justice**, **health**, **environment**al **crisis**, natural **disasters**, **education**, **governance**, **defense** and several more of them which necessitate decision-making, with the involvement of sophisticated intelligence.

The synergies between human intelligence and AI “promise” the **enhancement of humans in most of their aspects**. Such synergies may remain external—humans using AI as external to themselves, in terms of analysis, forecasts, decision—making and in general as a type of assistant-28 or may evolve into the merging of the two forms of intelligence either temporarily or permanently.

The second profoundly enters humanity, existentially—speaking, into uncharted waters. Elon Musk argues in favor of “having some sort of merger of biological intelligence and machine intelligence” and his company “Neuralink” aims at implanting chips in human brain. Musk argues that through this way humans will keep artiﬁcial intelligence under control.29 The proposition is that of “mind design”, with humans playing the role that God had according to theologies.30

While the temptation is strong—exceeding human mind’s capacities, far beyond what nature “created”, by acquiring the capacity for example to connect directly to the cyberspace or to break the barriers of biology31—the risks are signiﬁcant too: what if a microchip malfunction? Will such a brain be usurped or become captive to malfunctioning AI?

The merging of the two intelligences is most likely to evolve initially by invoking medical reasons, instead of human enhancement. But the merging of the two will most likely continue, as after all the limits between healing and enhancement are most often blurry. This development will give rise, as is analyzed below, to signif- icant questions and issues, the most of crucial of which is the setting of a threshold for the prevalence of the human aspect of intelligence over the artiﬁcial one.

Human nature is historically improved, enhanced, healed and now, potentially even re-designed in the future.32 Can a “medical science” endorsing such a goal be ethically acceptable and if yes, under what conditions, when, for whom and by what means? The answers are more difﬁcult than it seems. As the World Health Organi- zation—WHO—provides in its constitution, “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or inﬁrmity”.33

Therefore, why discourage science which aims at human-enhancement, even reaching the levels of post-humanism?34 Or if restrictions are to be imposed on human enhancement, on what ethics and laws will they be justiﬁed? How ethically acceptable is it to prohibit or delay technological evolution, which among several other magniﬁcent achievements, promises to treat death as a disease and cure it, by reducing soul to self, self to mind, and mind to brain, which will then be preserved as a “softwarized” program in a hardware other than the human body?35

After all, “According to the strong artiﬁcial intelligence program there is no fundamental difference between computers and brains: a computer is different machinery than a person in terms of speed and memory capacity.”36

While such a scientiﬁc development and the ones leading potentially to it will be undoubtedly, groundbreaking technologically-speaking, is it actually—ethically- speaking—as ambivalent as it may sound or is it already justiﬁed by our well— rooted human-centrism?37

Secular humanism may have very well outdated religious beliefs about afterlife in the area of science but has not diminished the hope for immortality; on the contrary, science, implicitly or explicitly predicts that matter can in various ways surpass death, albeit by means which belong in the realm of scientiﬁc proof, instead of that of metaphysical belief.38

If this is the philosophical case, the quest for immortality becomes ethically acceptable; it can be considered as embedded both in the existential anxiety of humans, as well as in the human-centrism of secular philosophical and political victory over the dei-centric approach to the world and to our existence.

From another perspective of course and for the not that distant philosophical reasons, the quest for immortality becomes ethically ambiguous or even unacceptable.39 By seeking endless life we may miss all these that make life worth living in the framework of ﬁniteness. As the gerontologist Paul Hayﬂick cautioned “Given the possibility that you could replace all your parts, including your brain, then you lose your self-identity, your self-recognition. You lose who you are! You are who you are because of your memory.”40

In other words, once we begin to integrate the two types of intelligence, within ourselves, until when and how we will be sure that it is human intelligence that guides us, instead of the AI? And if we are not guided completely or—even further—at all by human intelligence but on the contrary we are guided by AI which we have embodied and which is trained by our human intelligence, will we be remaining humans or we will have evolved to some type of meta-human or transhumant species, being different persons as well?41

AI promises tor threatens to offer a solution by breaking down our consciousness into small “particles” of information—simplistically speaking—which can then be “software-ized” and therefore “uploaded” into different forms of physical or non-physical existence.

Diane Ackerman states that “The brain is silent, the brain is dark, the brain tastes nothing, the brain hears nothing. All it receives are electrical impulses--not the sumptuous chocolate melting sweetly, not the oboe solo like the ﬂight of a bird, not the pastel pink and lavender sunset over the coral reef--only impulses.”42 Therefore, all that is needed—although it is of course much more complicated than we can imagine—is a way to code and reproduce such impulses.

Even if we consider that without death, we will no more be humans but something else, why should we remain humans once technologies allow us be something “more”, in the sense of an enhanced version of “being”? Why are we to remain bound by biological evolution if we can re-design it and our future form of existence?

Why not try to achieve the major breakthrough, the anticipated or hoped digita- lization of the human mind, which promises immortality of consciousness via the cyberspace or artiﬁcial bodies: the uploading of our consciousness so that it can live on forever, turning death into an optional condition.43

Either through an artiﬁcial body or emulation-a living, conscious avatar—we hope—or fear—that the domain of immortality will be within reach. It is the prospect of a “substrate-independent minds,” in which human and machine consciousness will merge, transcending biological limits of time, space and mem- ory” that fascinates us.44

As Anders Sandberg explained “The point of brain emulation is to recreate the function of the original brain: if ‘run’ it will be able to think and act as the original,” he says. Progress has been slow but steady. “We are now able to take small brain tissue samples and map them in 3D. These are at exquisite resolution, but the blocks are just a few microns across. We can run simulations of the size of a mouse brain on supercomputers—but we do not have the total connectivity yet. As methods improve, I expect to see automatic conversion of scanned tissue into models that can be run. The different parts exist, but so far there is no pipeline from brains to emulations.”45

The emulation is different from a simulation in the sense that the former mimics not only the outward outcome but also the “internal causal dynamics”, so that the emulated system and in this particular case the human mind behaves as the original.46 Obviously, this is a challenging task: we need to understand the human brain with the help of computational neuroscience and combine simpliﬁed parts such as simulated neurons with network structures so that the patterns of the brain are comprehended. We must combine effectively “biological realism (attempting to be faithful to biology), completeness (using all available empirical data about the system), tractability (the possibility of quantitative or qualitative simulation) and understanding (producing a compressed representation of the salient aspects of the system in the mind of the experimenter)”.47

The technological challenges are vast. Technologically speaking, the whole concept is based on some assumptions which must be proven both accurate and feasible.48 We must achieve technology capable of scanning completely the human brain, of creating software on the basis of the acquired information from its scanning and of the interpretation of information and the hardware which will be capable of uploading or downloading such software.49 The steps within these procedures are equally challenging. Their detailed analysis evades the scope of this book.

Some critical questions—they are further analyzed in the next chapters—emerge however: how will we interpret free will in emulation? What will be the impact of the environment and of what environment? How will be missing parts of the human brain re-constructed and emulated? What will be the status of the several emulations which will be created—i.e. failed attempts or emulations of parts of the human brain—in the course of the search for a complete and functioning emulation? Will they be considered as “persons” and therefore as having some right or will they be considered as mere objects in an experimental lab? How are we going to decode the actual subjective sentiments of these emulations? Essentially, are emulations the humans “themselves” who are emulated or a different person? Even further what will human and person mean in the era of emulation?

From a different perspective, the victory over death may be seen as a danger of mass extinction, absorption or de-humanization. In this new, vast universe of emulations will there be place for humans?50

From the above—mentioned discussion, it becomes obvious that at a large extent, the prospect of risk or of expectation is a matter of perspective, for which there is no unanimous agreement in the present. This may be the greatest danger of all, for which Asimov warned us: unleashing technology while we cannot communicate among us, in the face of it.

The existential prospect as well as the risks by AI may self-evidently emerge from technological advances but are determined on the basis of politico—philosophical or in the wider sense, ethical assumptions. This is where the need for legal regulation steps in. Such a need was often underestimated in the past in favor of a solely technologically oriented approach—although exceptions raising issues other than technological can be found too.51 The gradual raising of ethic—political, philosoph- ical and legal issues constitutes a rather recent development, partially because of the realization of the proximity of the risks and of the expectations.

The public debate is often divided between two “contradictory” views: fear of AI or enthusiastic optimism. The opinions of the experts differ respectively.

Kurzweil, who has come with a prediction for a date for the emergence of singularity—until 2045—expects such a development in a positive way: “What’s actually happening is [machines] are powering all of us,” Kurzweil said during the SXSW interview. “They’re making us smarter. They may not yet be inside our bodies, but, by the 2030s, we will connect our neocortex, the part of our brain where we do our thinking, to the cloud.”52

In a well-known article—issued on the occasion of a ﬁlm—Stephen Hawking, Max Tegmark, Stuart Russell, and Frank Wilczek shared a moderate position: “The potential **beneﬁts** are **huge**; **everything that civilization has to offer** is a product of **human** intelligence; we cannot **predict** what we might achieve when this intelligence is **magniﬁed** by the tools **AI** may provide, but the **eradicat**ion of **war, disease, and poverty** would be high on anyone’s list. Success in creating AI would be the **biggest event in human history**. . . Unfortunately, it **might also be the last, unless we learn how to avoid the risks**.”53

**Unregulated AI risks extinction – defense doesn’t assume interactions of multiple simultaneous threats**

**Pamlin 15**

Dennis Pamlin, Executive Project Manager of the Global Risks Global Challenges Foundation, and Stuart Armstrong, James Martin Research Fellow at the Future of Humanity Institute of the Oxford Martin School at University of Oxford, Global Challenges Foundation, February, http://globalchallenges.org/wp-content/uploads/12-Risks-with-infinite-impact.pdf

If a safe **a**rtificial **i**ntelligence is developed, this provides a **great resource for improving outcomes and mitigating all types of risk**.585 **A**rtificial **i**ntelligence risks **worsening nanotechnology risks**, by allowing nanomachines and weapons to be designed with intelligence and without centralised control, **overcoming the main potential weaknesses** of these machines586 by putting planning abilities on the other side. **Conversely, nanotechnology abilities worsen artificial intelligence risk**, by giving AI extra tools which it could use for developing its power base.587 Nanotechnology and synthetic biology could allow the efficient creation of vaccines and other tools to **combat global pandemics**.588 Nanotechnology’s increased industrial capacity could allow the creation of large amounts of efficient solar panels to **combat climate change**, or even potentially the efficient scrubbing of CO2 from the atmosphere.589 Nanotechnology and synthetic biology are sufficiently closely related 590 (both dealing with properties on an atomic scale) for methods developed in one to be ported over to the other, potentially **worsening the other risk.** They are sufficiently distinct though (a mainly technological versus a mainly biological approach) for countermeasures in one domain not necessarily to be of help in the other. Uncontrolled or malicious synthetic pathogens could **wreak great damage on the ecosystem**; conversely, controlled and benevolent synthetic creations could act to **improve and heal current ecological damage**.

**Our scenario isn’t too far off. LAWS are *UNIQUELY* dangerous in this environment. China seeks to dominate by 2030 and non-regulation puts safe development at risk. HOWEVER, this isn’t inevitable – the US should seek ways to cooperate with China instead of competing. That’s key and staves off global escalation and arms racing.**

* LAWS -- Lethal Autonomous Weapon Systems
* Current development of AI is spearheaded by US & China
* The Sullivan 10/4/2021 card in the Heg ADV also says “only the United States and China have the resources, commercial might, talent pool, and innovation ecosystem to lead the world in AI”. Which proves our scenario is correct and that US-China coop would control the direction of AI globally.

**Haenel 18**

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2.5. The Ultimate Weapon: Is AI Determined to Fuel a Sino-American Arms Race?

But it is not necessary to venture that far down the line of what destructive force might and might not be deducted from AI in the future as contemporary autonomous weapons already are an integral part of the armories of modern armies. “The technology to deploy autonomous weapons is largely in place, and the engineering tasks seem to be easier than those involved in creating self -driving cars,” stated the UK Ministry of Defense in 2016.58 Non-proliferation activists argue that the development of Lethal Autonomous Weapon Systems (**LAWS**) **is particularly worrying given the** parallel **development of privately accessible autonomous drones**, effectively **introducing the use of precise lethal weapons** anywhere and anytime, not just on dedicated battlefields, and thus further **tear at an already crumbling sense of security within industrialized societies**. Three leading computer scientists and philosophers thus ask, “are autonomous weapons likely to reduce political aversion to conflict, or perhaps result in accidental battles or wars? Would such weapons become the tool o choice or oppressors or terrorists?”59 And, most importantly, who will be held responsible or autonomous attacks legally, if not ethically, given that it is only software that calculates who to kill?

Analogue to Google’s AlphaGo automatically improving itself in order to beat the best human players in Go only by following its goal to maximize the probability o winning no matter the cost, a similarly programmed autonomous weapon “would see no difference between victories that required it to kill one or 1,000” men outlining great challenges to humanitarian law.60 Reducing the amount o humans involved in carrying out invasive strikes against the defense organs supporting the current international security system, e.g. by coordinating swarms of autonomous drones overwhelming an adversary’s defense system, will uproot its equilibrium o prioritized, mutual defense: “This would lead to a very unstable international configuration, encouraging escalation, arms races and the replacement o deterrence by preemption.”61 The advent of widespread introduction o LAWS thus echoes the looming threat o the early Cold War be ore the ratification of the Treaty on the Non-Proliferation of Nuclear Weapons, especially so today when two central forces manifested as the catalysts of the weaponization of Artificial Intelligence: the United States of America and the People’s Republic of China.

The specific characteristics of AI applications cater tremendous benefits to the relevant power mastering its use in weapon systems first, or holds the decisive advantage over its trailing adversaries. Any new generation of weapons invented by humans have become either more powerful, precise, or both, over time by maximizing the inflicted damage while minimizing the ef ort needed or its execution. AI-assisted remote and autonomous weapons will cater to both of these values, effectively reducing the operational limits of its deployment to a new minimum. Naturally, this sparks the interests of defense contractors, governments, and international organizations alike. But unlike the Manhattan Project of the 1940s, the current development of AI is spear-headed by private technology companies using their wealth, expertise and user databases to steer the challenging task of funding, researching, developing, and testing their own innovations internally successfully, and do so “principally in the US and China.”62 These almost entirely decoupled markets already experience a parallel augmentation of AI in consumer products, led by Google, Facebook and Microsoft on the one side, and Baidu, Alibaba, and Tencent on the other side o the Pacifc.63 But Google’s AlphaGo did not just de eat the world’s champion in Go in May 2017, it defeated Ke Jie, a Chinese citizen, in a game streamed live online rom Hong Kong. Once it became clear the US-American algorithm would de eat the incumbent Chinese champion the streaming website was immediately blocked within China by authorities.64 Shortly after that, the government has announced an enormous funding program to foster and catalyze Chinese talents and start-ups to take over the market, and becoming “the global leader in the field by 2030.”65 Already, the trend or Chinese computer scientists to look to the United States or education and employment is reversing, boosting Chinese companies with high-skilled expertise and private connections to Silicon Valley.66

But while Beijing is rallying financial and political support to help build up its domestic AI industry **to become globally competitive with increasing velocity**, such a centralized program is missing in the Trump administration’s budget plans thus ar. Commentators are yet undecided if this will help the Chinese companies to level the playing field with their American counterparts or outright outpace them, or if China will continue to run a parallel domestic market large enough to be sufficient without the meddling of foreign actors. Their reinforced policy to dominate the sector by 2030, however, indicates that it will not only be intended domestically but also to anchor Chinese high-technology, and the intellectual property **at its foundation**, at the core of the interdependent global economy of the unfolding century. Such a “race dynamic” favoring hastened deployment of AI technology is expected to **diminish** the interest to invest in its **robust development**, putting AI Safety researchers on alert.

Bostrom, or example, has thus made the case or collaborating efforts to innovate rather than competing against each other, allowing for a safer pace of innovation, **thus avoiding potential conflict**, and above all setting a stepping stone to an international resolution to take the prospects and dangers of Artificial Intelligence seriously.67 Particularly worrying is the act that most, if not all, calls or robust development are heeded only by Western academics and their institutions, defining a linguistic, academic, and political rift between the West and China. And while both consumer and government adoption of autonomous technology is slowly taking up pace in Western industries, the Asian market, and China in particular, appears to welcome drastic innovations in AI-assisted products much more easily, offering higher potentials to grow or comparatively less-regulated domestic companies in Asia. These developments already outline a “**very unstable international configuration, encouraging escalation and arms races**” from an economic point of view alone. As their respective national security bodies ramp up military programs to further implement AI in their tactical arsenal the most pressing question remains **how**—**or if** at all— **A**rtificial **I**ntelligence, ultimately, **can be governed**.

**Building interoperability with allies is key. This bolsters the possibility for coop with China down the road.**

**Sullivan** 10/4/20**21**

Ryan Sullivan Army pilot studied at the prestigious Fudan University in Shanghai, China, as an Olmsted Scholar graduate-level work in the field of Artificial Intelligence to deliver an in-depth study of the critical elements of U.S.-China competition in Artificial Intelligence, “The U.S., China, and Artificial Intelligence Competition Factors”, <https://www.airuniversity.af.edu/Portals/10/CASI/documents/Research/Cyber/2021-10-04%20US%20China%20AI%20Competition%20Factors.pdf?ver=KBcxNomlMXM86FnIuuvNEw%3D%3D> – ECM

Diverging values between the CCP and liberal democracies represent the greatest obstacle to U.S.-China collaboration or cooperation on AI. Today, the gulf between these values is widening. While AI itself does not have values, competition involving technology is not value neutral. Collaboration between the U.S. and China in AI applications now occurs in academia and medical research; however, national security concerns and growing mistrust between our nations puts even these in jeopardy. The way forward will require clear boundaries and new mechanisms to address values competition and the resolution of disputes over appropriate AI standards will require innovative approaches to diplomacy. While military-to-military cooperation on humanitarian assistance and disaster relief seem the most likely area for the U.S. and China to find common ground and opportunities to collaborate in the security sphere, in the near-term, the U.S. Department of Defense (DoD) **should remain focused on building interoperability with allies** to promote data sharing **and pursue AI’s ethical applications in these alliance and partnership military frameworks**. With those agreements, processes, and standards in place, then the potential for future military engagements and outreach involving AI applications with China would prove more beneficial.

AI competition requires a long-term view, one that should consider that the Communist Party-centric values of Xi Jinping and the current rulers of China **do not reflect the broader societal values of the Chinese people**. **Xi will not remain in power forever**, and while we may not know who will replace him or when that could occur, change in China will come, and the U.S. should prepare for all possibilities from a position of competitive strength. Only such a position guards **against unnecessary and unhelpful conflict** and remains open to cooperation, but from a position of advantage that comes from standing with nations aligned on the basis of shared democratic values.

**1AC Solvency: Generic**

**The plan solves – It would establish a 10-year roadmap for using AI thru annual military exercises. Absent the plan the SQ will become unsustainable cede control to China**

* NATO has yet to upgrade AI norms, US lead is key

**Ryseff** 10/9/20**20**

James Ryseff is a technical policy analyst at the nonprofit, nonpartisan RAND Corporation., “The United States Can Only Achieve Ai Dominance With Its Allies”, <https://warontherocks.com/2020/10/the-united-states-can-only-achieve-ai-dominance-with-its-allies/> -- ECM

As the United States races with China to apply **A**rtificial **I**ntelligence for military purposes, many experts worry that it may be hampered by a shift in the nature of AI. The conventional wisdom has been that, until now, American technologists could depend on elite researchers and faster computers to outperform their Chinese rivals. However, these advantages are no longer the keys to harnessing AI most effectively. Data is. Chinese AI experts believe that China’s larger population and lax privacy controls give China a durable advantage in collecting the best data sets to teach AI algorithms how to optimize their performance. Kai-Fu Lee, China’s most prominent AI researcher, has dubbed China the “Saudi Arabia of data” and argues that China’s data advantage is expanding by the day. The Center for Data Innovation, an American think tank, agrees, calculating that the Chinese population generates terabytes more information than Americans do.

In reality, determining who holds the advantage in data is far more complicated than simply counting how many bytes of information are stored in each country. As a recent Center for Security and Emerging Technology report rightly points out, the quality of data and how well it has been curated and labeled usually matter more than simply how much data one has. Even so, the analysts take for granted that China’s size will ultimately give it the advantage in commercial data, one that may let its corporations overtake their American counterparts in AI.

However, these conclusions overlook the primary advantage American technology companies hold over their Chinese counterparts: **its global user base**. For companies like Google and Facebook, the competition to amass data is not between the digital activities of 330 million Americans against the virtual footprint of over one billion Chinese citizens. Instead, **their products hold near-monopolies** in the United States, Europe, Latin America, Africa, and most of Asia. In contrast, Chinese equivalents like Baidu and WeChat have only a handful of non-Chinese users. This global reach gives American technology companies an advantage both in the total volume of data they collect and in the diversity of data harvested. Chinese data sets, for now, are still largely blind to conditions outside of China. AI algorithms trained on those data sets would struggle to travel outside its borders.

The success of American technology companies illustrates the most promising path for the U.S. military to pursue at the dawn of its own AI age. That does not mean that the Department of Defense should simply copy Silicon Valley’s strategy mindlessly. While data from the commercial sector — such as an individual’s social connections, current employer, or personal finances — will continue to be a gold mine for global intelligence agencies, data relevant to the future battlefield will primarily concern soldiers, vehicles, training exercises, and the like. No organization will have more relevant data for these use cases than the military itself. Fortunately, the Defense Department has positioned itself well to become the globally dominant platform for military data, just as American technology companies dominate the global marketplace in their realms. The United States counts most industrialized nations as military allies and equipment manufactured by the United States or its NATO allies is driven and flown around the world. However, the Defense Department has yet to capitalize on this potential. NATO weapons and vehicles were originally designed to be interoperable in an industrial-age sense, shooting the same bullets or refueling from the same connectors. Unfortunately, **NATO has not yet upgraded for the information age**. The data generated by U.S. Army tanks cannot easily be accessed or aggregated with data generated by Marine Corps tanks, let alone British ones. Just as the Goldwater-Nichols Act once pushed America’s separate armed services to break out of their isolated battlefield domains, military data must now discover how to operate jointly as well. **Three initiatives could be critical to accomplishing this**.

**First**, the Defense Department could create a 10-year roadmap for upgrading data interoperability that lays out specific operational objectives to demonstrate improvements. To ensure these objectives are met, **they could be incorporated into the major annual exercises conducted with NATO** and East Asian allies. For example, American and South Korean units could draw spare parts and other consumables from each other during their annual training exercises. Throughout the exercise, both sides could confirm their logistics databases can combine to present a unified picture of the allied logistical situation and provide projections of future needs as the simulated combat event evolves.

Establishing tangible objectives and aligning the timeframe with existing multinational exercises will be the key to success. Militaries invest a great deal of time and effort training their personnel to be ready for the fight. They must now learn how to “train” and prepare their data as well. This can mean many things. When training their personnel, militaries spend some of their time imparting specific skillsets that will be useful in combat. In other cases, soldiers learn how to work together to solve unforeseeable problems as they arise — or simply learn how the operational routines of other units or allied militaries differ from their own. Regardless, commanders recognize their soldiers must routinely practice their skills under real-world conditions if they will be expected to work as an effective team on the battlefield.

**Data needs the same types of preparation** to be ready for its role in the fight. Much as soldiers need to leave the garrison and work through practical exercises in the field, it is not enough to develop a technical specification documenting how two data sets are supposed to work together. Someone needs to actually make the data sets work together. They must be routinely explored, analyzed, and aggregated to solve real problems in order to ensure they will remain interoperable and effective. Similarly, the analysts and engineers responsible for curating data need opportunities to interact with each other in order to develop the operational routines necessary to ensure effective collaboration during a crisis. **Without these forcing functions,** too much military data will remain **isolated and unusable** at the scale needed to engineer AI algorithms.

**Second**, the military may need to collaborate with allies to achieve common understandings about when and how to share data. European governments in particular have begun to codify digital norms for the consumer space in frameworks like the General Data Protection Regulation and the establishment of new legal concepts like the Right to be Forgotten. **The U**nited **S**tates **could play a role in shaping the equivalent norms in the national security and public policy space**. Otherwise, fragmented data repositories from the United States and its allies **may not be able to achieve** the **critical mass** — that is, gather enough data — **necessary to compete with China**’s data warehouses.

Past disagreements between the United States and its allies over norms related to atomic weapons demonstrate how these considerations can ultimately impact military operations. In Europe, the United States managed to forge an agreement that allowed the stationing of tactical nuclear weapons on the territory of its NATO allies, even in the face of significant domestic opposition in key nations such as West Germany. In contrast, the United States was unable to achieve a similar consensus among its allies in Asia. Both Japan and New Zealand banned the introduction of nuclear weapons into their territory, causing headaches for U.S. Navy operations in the region. While in that case Navy ships could find alternate ports to operate from, a similar divergence in norms would have much greater consequences for the U.S. military’s ability to develop AI. Data withheld is data lost.

Most norms about the use of military data **will likely be uncontroversial**. Unlike Facebook or Google, whose business models depend on precisely targeting ads at their user bases, militaries in democracies have little reason to exchange personally identifiable information or other sensitive details about their citizens. Norms about controversial topics such as autonomous systems may prove more difficult to forge a consensus around. Agreements that data provided by partners would not be used to train these systems without explicit consent could be a compromise acceptable to all parties.

**Finally**, the United States could seek deeper integration and cooperation with its **allies who have unique resources to advance specific applications of AI**. Many, including the National Security Commission on Artificial Intelligence, have called for the United States to leverage its existing “Five Eyes” alliance and extend it to include cooperation in AI. A complementary approach might be to focus on partners who have unique technical assets to contribute. For example, East Asian allies such as Japan and South Korea have invested heavily in robotics and automation, which makes them attractive partners for developing more capable drones and other autonomous vehicles. They may also have fewer hesitations about deploying these technologies than other potential partners. Similarly, the Israeli government has carefully incubated a world-class cyber security sector, potentially positioning it as a valuable collaborator in training AI-enhanced cyber defenders how to protect critical infrastructure and assets.

Ultimately, close collaborators in any AI alliance must pass two tests: They must be able to usefully contribute to the work, and they will also need to be trustworthy enough to share in these cutting-edge technical advancements. While achieving the kind of close collaboration with allies that the United States has enjoyed in other realms may be difficult, it will be essential if the United States hopes to achieve the data dominance needed **to succeed in future combat.**

**Establishing a common set of definitions over how AI should be used would set the terms of cooperation. That’s key to coalition effectiveness and cohesion**

**Mahoney 4/30**/2022

Casey Mahoney is a U.S. Institute of Peace–DoD Minerva Peace & Security Scholar and a Ph.D. Candidate in political science at the University of Pennsylvania. “Shared Responsibility: Enacting Military AI Ethics in U.S. Coalitions.”, <https://nationalinterest.org/blog/techland-when-great-power-competition-meets-digital-world/shared-responsibility-enacting> -- ECM

A Responsible AI Coalition

It is in the U.S. interest to leverage the creative potential of a diverse AI “ecosystem.” However, it is also necessary to establish habits that mitigate the risk that political, cultural, and organizational differences among future coalition partners might undermine collective, responsible AI use.

To do this, the Defense Department can take steps now to increase the reliability with which future coalitions will operationalize the foundations of international cooperation on military AI. The DoD should pursue the three objectives and consider specific actions to pursue them. Building these goals into the charter of the DoD’s new Office of the Chief Data and AI Officer (CDAO) that Deputy Secretary Kathleen Hicks directed be prepared by June 1, 2022, would help align institutional incentives to accomplish them.

**Establish a common language**. First, policymakers, commanders, and technical and legal experts in future coalitions must be able to speak a common language to communicate about how AI systems ought to be used on the battlefield—let alone about how they are developed and validated. A December 2021 report by the Center for Naval Analysis identifies 565 unique policy and ethics “risk elements” the use of autonomous systems pose in military applications. But, given the “bias that occurs when operating in coalition and allied environments … that stems from different sets of treaties, ROE, or cultural norms,” one imagines that the opportunities for miscommunication in the absence of agreement on the terms of debate will grow exponentially.

Despite China’s efforts to lead in setting international AI technical standards, it is clearly in the U.S. interest to pursue its own standards under which it collaborates with military partners. **The DoD should task the CDAO to oversee a process to identify what resources would be necessary to engage partners to develop and baseline U.S. programs around a technical glossary for AI**. Doing so would set the terms of debate among the international partners DoD seeks to recruit to the responsible AI ecosystem it seeks to establish. Without shared language, communicating about partners’ capabilities and intent to use AI responsibly will be difficult, posing risks for the strategic effectiveness and political cohesion of future coalitions.

**Specifically, focusing on military partners is key – The plan would shape military behavior, strategies, and planning ensuring a robustly responsible form of AI**

**Stanley-Lockman & Trabucco 3/22**

Zoe Stanley-Lockman & Lena Trabucco , “NATO’s Role in Responsible AI Governance in Military Affairs”, Zoe Stanley-Lockman Nanyang Technological University, Lena Trabucco University of Copenhagen, Center for Military Studies The Oxford Handbook of AI Governance Edited by Justin Bullock, Yu-Che Chen, Johannes Himmelreich, Valerie M. Hudson, Anton Korinek, Matthew Young , and Baobao Zhang Subject: Political Science, Political Institutions Online Publication Date: Mar 2022DOI: 10.1093/oxfordhb/9780197579329.013.69 – ECM

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.

A number of NATO entities carry out strategic and policy planning, recognizing the importance of policy alignment to sustain political strength and military effectiveness. As relates to S&T, allies’ representations to NATO, defense ministries, and policy entrepreneurs from the relevant entities summarized in Table 69.1 support and negotiate how the Alliance approaches EDTs. NATO’s strategic documentation and forward-looking policy analysis incorporates hints of technological determinism, including noting how technological change inevitably shapes the future strategic and operating environment. Further, the connections between technology and competitive advantage over adversaries and competitors are embodied in the Alliance’s desire to maintain its “**tech**nological **edge**” as the “foundation upon which NATO’s ability to deter and defend against potential threats ultimately rests.”50 This places technology **squarely within NATO’s core purpose** of deterrence and defense—and while this signals NATO’s express commitment to technology through these channels, this reliance on technology also obscures whether NATO’s governance capacity will be adaptive, anticipatory, or participatory. This position of technological determinism **may result in more limitations for AI governance**.

Standards and certification

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 tech**nology. 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.

**Creating a process for collecting international channel international partners to input points of contact creating a “responsible AI ecosystem”. That helps bolster US creditability over AI**

**Mahoney 4/30**/2022

Casey Mahoney is a U.S. Institute of Peace–DoD Minerva Peace & Security Scholar and a Ph.D. Candidate in political science at the University of Pennsylvania. “Shared Responsibility: Enacting Military AI Ethics in U.S. Coalitions.”, <https://nationalinterest.org/blog/techland-when-great-power-competition-meets-digital-world/shared-responsibility-enacting> -- ECM

Until now, the department has not needed to understand how its vast network of partner governments and militaries are absorbing a general-purpose technology like AI. A February 1 DoD memorandum identifies roles the CDAO and the undersecretaries for Policy, Acquisition and Sustainment (A&S), and Research and Engineering (R&E) will play in international cooperation on AI. But, DoD lacks a cross-cutting process for collecting technical and policy knowledge derived from these international interactions and integrating it into coalition policy, planning, or technical cooperation efforts on a country-by-country or weapons system-by-system basis.

The DoD should task the CDAO, Policy, A&S, and R&E offices to create one. These offices should establish metrics in R&D, TEVV, and acquisitions processes that incentivize the bureaucracy to prioritize technical and organizational interoperability and consider unique requirements that might arise from ethical or policy questions likely to arise in multinational use scenarios. This would help channel international partner input to relevant points of contact across the department, optimizing the value of the international “responsible AI ecosystem” to U.S. coalition efforts.

Engage allied publics. Last, differences in public opinion about the inherent legitimacy and desired forms of accountability for AI-based weapons reflect real divides within and between the polities that comprise America’s alliance network. **Bridging these gaps by monitoring public discourse and enhancing public diplomacy about military AI would have the effect of both educating the public at home and abroad and help raise expectations that transparency is the norm**. In an era in which states select and enact military strategies before a global public audience, it is important for Americans, allies, and others to see that if the U.S. military technological edge must be used in conflict, its leaders and its partners choose to do so responsibly.

As China and Russia continue to use AI tools to enhance authoritarian control at home, it is becoming commonplace to argue that the values America and its allies share for responsible AI can represent a competitive edge of soft power. This might well be the case. Only if America and its allies are capable of enacting these values on the AI-infused battlefield together, though, will **this advantage serve to help legitimize U.S.-led operations in the world’s eyes**. A coalition’s ability to uphold the laws of armed conflict is ultimately bounded by the capability and willingness of its least able members to do so.

**There are no DAs – The DoD is already engaging to establish principles for AI development. *BUT* that won’t solve. *ONLY*, Military cooperation between the US and Allies can solve.**

**Mahoney 4/30**/2022

Casey Mahoney is a U.S. Institute of Peace–DoD Minerva Peace & Security Scholar and a Ph.D. Candidate in political science at the University of Pennsylvania. “Shared Responsibility: Enacting Military AI Ethics in U.S. Coalitions.”, <https://nationalinterest.org/blog/techland-when-great-power-competition-meets-digital-world/shared-responsibility-enacting> -- ECM

In March 2021, Google’s Eric Schmidt and former Department of Defense (DoD) deputy secretary Bob Work wrote in their preface to the 756-page report of the bipartisan National Security Commission on Artificial Intelligence (NSCAI), “America is **not prepared to defend or compete in** the **AI** era.” As chair and vice-chair of the NSCAI, respectively, they summarized the commission’s solution: “America needs to enlist its oldest allies and new partners to build a safer and freer world for the AI era.”

Though the U.S. military is taking pains to ensure AI does not erode its ideal to fight wars ethically, it cannot afford to leave its allies and partners behind in this endeavor. DoD is working to ensure the U.S. military can deter and fight AI-infused armed conflicts as part and likely leader of future coalitions using ethical, or “responsible,” AI. Efforts have focused on establishing broad principles for AI development and use and have targeted the technical enablers of multinational uses of AI, like standardizing data-labeling processes and pursuing data-sharing agreements with partners.

**This is not enough**. On the coalition battlefield, the ethics of military AI come down to the choices leaders and commanders make about how to use AI-enabled weapons. But it is not clear that coordination and joint decisionmaking practices at the political and operational levels used in U.S.-led coalitions to date are well-suited to operations in an AI era. How will coalitions manage a more complex decision space, where different nations’ AI systems pass algorithm outputs to operators and analysts across a coalition? Will decisionmaking outcomes be consistent with our ethical ideals?

AI is making human judgment in war more, not less, important. This means the United States and its allies and partners **will need to innovate together**, focusing on more than broad ethical principles and technical solutions. The U.S. defense enterprise can take three concrete steps I describe below to ensure its own and its partners’ technology and ideals align with the organizational structures—that is, in coalitions—in which AI-enabled weapons will be put to use.

Foundations of AI Responsibility in U.S. Alliances and Partnerships

Because the United States fights in coalitions in most armed conflicts, focusing on developing partnerships to integrate military AI is a prudent approach. The NSCAI charged the DoD with achieving broad military AI readiness by 2025, including by “promoting AI interoperability with allies and partners,” and the Pentagon is heeding this call.

In September 2020, DoD had already convened representatives from thirteen countries from NATO, non-NATO alliances, and other defense partnerships to socialize its ethical principles for AI and coordinate on military AI ethics policy. This AI Partnership for Defense (AIPfD) aims to “promote the responsible use of AI, advance shared interests and best practices … establish frameworks to facilitate cooperation, and coordinate strategic messaging.”

Since then, engagement with international defense partners has broadened and deepened. By June 2021, AIPfD had added three additional member states to the group; in March 2022, it convened its fifth international dialogue. AIPfD cooperation has deepened from high-level conversations to discussions on AI-use scenarios, marking progress toward a key NSCAI recommendation the DoD focus on specific AI use-cases in exercises and wargames.

In addition, in October 2021, NATO adopted an alliance-wide AI strategy focused mostly on responsible use. Biden administration initiatives in the Indo-Pacific in 2021—reinvigorating the Quadrilateral Security Dialogue (Quad) with Australia, India, and Japan and concluding the Australia-U.K.-U.S. (AUKUS) technology-sharing agreement—also targeted AI cooperation. Early work in the Quad has included collaboration on AI technical standards more generally, while AUKUS members are cooperating on capabilities for use in contested military environments.

Finally, U.S. military services have also begun incorporating new AI systems into multinational operational exercises, experimentation that can help foresee and overcome the technical and operational challenges of using novel technology in coalitions.

Important early steps like these help enact standards, like keeping humans in AI systems’ decision loops and having strong technology-policy review processes, meant to avoid worst-case scenarios where uncontrolled, unvalidated systems are fielded in armed conflict.

But, **the Department has more to do to avoid the misuse or failure of AI-enabled weapons in future coalition operations**. Whether the employment of any weapons system in armed conflict is “ethical” or “responsible” ultimately depends on the assessments commanders and political leaders make. In multinational operations with AI tools at the “tip of the spear,” non-U.S. leaders and commanders will also be faced with choices that determine whether they use such tools to enact values, like proportionality and discrimination, in fighting alongside U.S. forces. It is in the U.S. interest that they do this. Guaranteeing that they do, however, is difficult.

**1AC Solvency: Cyber**

**The plan would solve cyber – it establishes a new set of guidelines on Cyber Defense**

* The plan would be implemented thru “sparring sessions” to establish defensive tactics and operations which the 1AC Ryseff evidence outlines

**Taddeo & Floridi 18**

NATURE | VOL 556 | 19 APRIL 2018, Mariarosaria Taddeo is a research fellow and deputy director of the Digital Ethics Lab at the Oxford Internet Institute, University of Oxford, UK; and a Turing fellow of the Alan Turing Institute, London, UK. Luciano Floridi is professor of philosophy and ethics of information at the University of Oxford, UK; director of the Digital Ethics Lab at the Oxford Internet Institute; and chair of the Data Ethics Group at the Alan Turing Institute. “Regulate artificial intelligence to avert cyber arms race”, <https://media.nature.com/original/magazine-assets/d41586-018-04602-6/d41586-018-04602-6.pdfv> --ECM

International dialogue and action must resume. NATO could pave the way through its forthcoming guidelines, although it is currently unclear what their scope will be.

Meanwhile, research on AI for cyberdefence is progressing quickly. The United States is in the lead, technologically. It aims to incorporate AI into its cyberdefence systems by 2019 (ref. 3). The US Department of Defense (DOD) has earmarked $150 million for research. The US Defense Advanced Research Projects Agency (DARPA) is developing the techniques and strategies. Steps have already been taken. In DARPA’s 2016 Cyber Grand Challenge competition, seven AI systems, developed by teams from the United States and Switzerland, fought against each other. The systems identified and targeted their opponents’ weaknesses while finding and patching their own.

The DOD will issue the first US report on AI strategies for national defence in May. There is, as far as we know, no indication of what its approach will be. Previous documents, such as The DOD Cyber Strategy from 2015 or the 2016 National Cyber Incident Response Plan, did not cover autonomous systems, machine learning or AI. The 2012 DOD directive on ‘Autonomy in Weapon Systems’ focused on internal procedures for deploying AI but was silent on when the United States would do so in the international arena.

AI is a priority for China, which aims to become a world leader in machine-learning technologies. In July 2017, the Chinese government issued its Next Generation AI Development Plan. Military implementation of AI, on the battlefield as well as in cyberspace, is a crucial part of the strategy. But it is unclear to what degree China plans to deploy AI actively in cyberdefence.

Russia has not released any public documents about its strategies for AI in defence. However, in a video message released in 2017, President Vladimir Putin referred to AI and stated: “Whoever becomes the leader in this sphere will become the ruler of the world.” Experts agree that Russia is focusing on developing AI-enhanced tools for its conventional forces. However, since 2014, the Russian National Defense Control Center has been using machine-learning algorithms to detect online threats. Allegedly, Russia has pioneered the use of AI to spread disinformation and intervene in the public debates of other nations, including the 2016 US presidential election and the United Kingdom’s EU membership referendum. Although these operations are not part of national defence strategies, they indicate Russia’s advanced AI capabilities.

North Korea has a history of cyberspace aggression. It was implicated, for example, in the WannaCry attack in 2016 and in another major breach, against Sony Pictures, in 2014. The country lacks technical expertise in AI but is likely to want to catch up with its adversaries.

The EU is stepping up, too. In 2017, it reassessed cybersecurity and defence policies and launched the European Centre of Excellence for Countering Hybrid Threats, based in Helsinki. The EU has the most comprehensive regulatory framework for state conduct in cyberspace so far. Yet these directives do not go far enough. The EU treats cyberdefence as a case of cybersecurity, to be improved passively by making member states’ information systems more resilient. It disregards active uses of cyberdefence and does not include AI.

This is a missed opportunity. The EU could have begun defining red lines and proportionate responses in its latest rethink. For example, the 2016 EU directive on ‘Security of Network and Information Systems’ provides criteria for identifying crucial national infrastructures, such as health systems or key energy and water supplies that should be protected. The same criteria could be used to define illegitimate targets of state-sponsored cyberattacks.

**Regional forums, such as NATO** and the EU, must take the following three **steps to avoid serious imminent attacks on state infrastructures**, and to maintain international **stability**.

THREE STEPS

Define legal boundaries. The international community needs to agree urgently on red lines that distinguish between legitimate and illegitimate targets. Also needed are definitions of proportionate responses for cyberdefence strategies. International consensus at the UN level will ultimately be required. Until then, guidelines from regional multilateral bodies, such as NATO and the EU, **must cover these issues and lead by example**.

Test strategies with allies. **‘Sparring’ exercises should be organized between friendly countries to test AI-based defence tactics**. These tests should be mandatory before any system is deployed. They could be in the form of DARPA’s Grand Challenge or the simulation exercises routinely run by NATO and the EU. Because AI learns by experience, these matches will improve the strategies of the alliance, while finding and healing weaknesses. Fatal vulnerabilities of key systems and crucial infrastructures should be shared with allies; policy frameworks should demand disclosure. Agreements and regulations with similar sharing and disclosure requirements include the EU Electronic Identification, Authentication and Trust Services Regulation and NATO’s Industry Partnership Agreement.

Monitor and enforce rules. The international community needs to agree how to audit and oversee AI-based state cyberdefence operations. ‘Alert and remedy’ mechanisms are needed to address mistakes and unintended consequences. A third-party authority with teeth, such as the UN Security Council, should rule on whether red lines, proportionality, responsible deployment or disclosure norms have been breached. Economic or political sanctions should be imposed on states that violate rules. NATO and the EU should enforce the norms within their remits.

The solution is difficult, but it is clear. **There is no time to waste**.

**2AC – Cyber ADV**

**2AC – Cyber Attack = Article V**

**Yes cyberattacks could trigger article V**

**Reuters 2/28**/2022

“Cyberattack on NATO could trigger collective defence clause – official”, <https://www.reuters.com/world/europe/cyberattack-nato-could-trigger-collective-defence-clause-official-2022-02-28/> -- ECM

LONDON/WASHINGTON, Feb 28 (Reuters) - A cyberattack on a NATO member state could trigger Article 5, its collective defence clause, **a NATO official said** on Monday, amid concerns that chaos in cyberspace around Russia's invasion of Ukraine could spill over into other territories.

The military alliance has for years made clear that a **serious cyberattack** could trigger the clause, but such a scenario has so far been largely hypothetical.

"Allies also recognise that the impact of significant malicious cumulative cyber activities might, in certain circumstances, be considered as an armed attack," the official told Reuters.

"We will not speculate on how serious a cyberattack would have to be in order to trigger a collective response. Any response could include diplomatic and economic sanctions, cyber measures, or even **conventional forces**, depending on the nature of the attack," the official said.

Whether or not a cyberattack met the threshold of an attack large enough to trigger Article 5 was a "political decision for NATO Allies to make," they added.

Britain and the United States have warned of potential cyberattacks on Ukraine which could have **international consequences** should, for example, malicious software designed to target networks in Ukraine start to spread elsewhere. read more

There has also been concern among cybersecurity experts that Russia could team up with some of the gangs and people who release malicious software, such as malware used to hold Colonial Pipeline to ransom in the United States last year.

**2AC – Yes Cyber attacks 🡺 War**

**The threshold is low if not unknown – shouldn’t risk it**

* The article cites -- Tess Bridgeman, co-editor in chief of the website Just Security and a former attorney in the Obama White House who is an expert on war powers and international law

**CNN 3/22**/2022

“A cyberattack could lead to war. But it is very unlikely”, https://www.cnn.com/2022/03/22/politics/russian-cyberattacks-what-matters/index.html

I called Tess Bridgeman, co-editor in chief of the website Just Security and a former attorney in the Obama White House who is an expert on war powers and international law.

“If a cyberattack causes significant **death, destruction or injury**, of the same sort that you would see from a more traditional attack using kinetic means, like **bullets or missiles,** you know, then you would call it a ‘use of force’ in international law,” she said.

A cyberattack that targeted a dam or air traffic control towers might rise to this level, but the government would try very hard to avoid responding to a cyberattack with a military attack, she said.

The attacks on the US to date have fallen short of the threshold to justify a military response.

As the government seeks countermeasures to respond, Bridgeman said, there’s a good chance they **won’t be publicly known**.

**That includes article V**

* The article cites -- Tess Bridgeman, co-editor in chief of the website Just Security and a former attorney in the Obama White House who is an expert on war powers and international law

**CNN 3/22**/2022

“A cyberattack could lead to war. But it is very unlikely”, https://www.cnn.com/2022/03/22/politics/russian-cyberattacks-what-matters/index.html

**A cyberattack could absolutely trigger Article 5**. NATO Secretary General Jens Stoltenberg made this clear in February just after Russia’s invasion.

“An attack on one will be regarded as an attack on all,” Stoltenberg said at a news conference when asked about a potential Russian cyberattack.

But he added that NATO would be very careful in assessing an attack and would make sure a cyberattack on Ukraine – shutting off electricity, say – that accidentally spilled over into Poland or Romania is not construed as an attack on those countries.

He also said it’s intentionally unclear **what kind of cyberattack would rise to the level of invoking Article 5**.

NATO, he said, **would not want to “give a potential adversary the privilege of defining exactly when we trigger Article 5**.”

**Cyber escalation is real and possible – 3 reasons**

* command, control, communication, and intelligence = (C3I) systems

**Acton 20**

Spring, James M. Acton holds the Jessica T. Mathews Chair and is Co-Director of the Nuclear Policy Program at the Carnegie Endowment for International Peace. “Cyber Warfare & Inadvertent Escalation”, <https://www.amacad.org/publication/cyber-warfare-inadvertent-escalation> -- ECM

This danger is likely to be exacerbated by any cyber vulnerabilities affecting nuclear forces and C3I systems. Most directly, the existence of such vulnerabilities could intensify existing fears of being disarmed–fears that are already acute in China and Russia (as well as in Pakistan and, most likely, North Korea).5 However, because of their unique characteristics and effects, cyber threats could create **at least three qualitatively new mechanisms by which a nuclear-armed state might come to the incorrect conclusion that its nuclear deterrent was under threat**. **First**, the purpose of cyber interference could be misinterpreted. In particular, espionage could be mistaken for an attack. **Second**, a cyberattack could have **a more significant effect than intended**. Malware implanted into information technology (IT) systems associated with non-nuclear weapons could accidentally spread into more sensitive nuclear-related systems, for instance. **Third**, the initiator of a cyber operation could be misidentified. An operation carried out by a third party, for example, **could be misattributed by one state in a bilateral confrontation** to its opponent. What makes these pathways so pernicious is that **the catalyst for escalation** could appear to its initiator to be a relatively **benign action**.

**To make matters worse**, such pathways could lead to **inadvertent escalation** even if the target of the cyber interference were not afraid of being completely disarmed. Today at least, this description fits the **U**nited **S**tates. If, **in a conflict against Russia**, say, **the U**nited **S**tates wrongly concluded that its strategic early-warning system was under cyberattack, **it might reason that Moscow was seeking to undermine U.S. missile defenses**, which use early-warning data, **prior to launching a nuclear attack**.6 Given that U.S. declaratory policy explicitly highlights the option of a nuclear response to non-nuclear attacks on nuclear C3I assets, such a “misinterpreted warning” might lead Washington to **use nuclear weapons**.7 **But even if it did not**, its response, which might include nuclear threats, **could still be escalatory**.

**Even small-scale cyber ops could trigger escalation**

**Acton 20**

Spring, James M. Acton holds the Jessica T. Mathews Chair and is Co-Director of the Nuclear Policy Program at the Carnegie Endowment for International Peace. “Cyber Warfare & Inadvertent Escalation”, <https://www.amacad.org/publication/cyber-warfare-inadvertent-escalation> -- ECM

Surveillance operations in cyberspace, even if conducted exclusively for defensive purposes, **pose unique risks of escalation**. Cyber surveillance of an adversary’s nuclear forces can serve purposes besides damage limitation. In any dyad involving two nuclear-armed states, each has a strong incentive to monitor the status of the other’s nuclear forces at all times–and particularly during a crisis or conflict–including for the exclusively defensive purpose of spotting any preparations for nuclear use. Several intelligence collection techniques, including overhead imagery and signals intelligence, are likely used for this purpose. Given the potentially unique advantages of surveillance in cyberspace, however, states may see good reason to adopt it alongside these other approaches, especially if they judge that the likelihood of cyber espionage being detected is small.

Depending on the sophistication of the malware used and the target’s defenses, the true likelihood of being detected may or may not be small, but **the consequences of being caught could be significant**. In fact, if the target detected ongoing cyber espionage of networks associated with its **nuclear forces** or C3I systems, **inadvertent escalation could result** from either of two concerns that are distinct from those that might plausibly be generated by other forms of surveillance.

**Lack of agreement of what constitutes a cyber-attack causes miscalculation and escalation**

**Hegenbart 14**

Christine, Research Assistant at the Academy for Politics and Current Affairs of the Hanns Seidel Foundation in Munich. She was a PfP Fellow at the Research Division at the NATO Defense College in the spring of 2013. “Semantics Matter NATO, Cyberspace and Future Threats.” NATO Defense College (2014). https://www.jstor.org/stable/resrep10385

All in all, the use of cyber weapons is especially problematic and is a very serious issue. Currently most states, and also NATO as a military alliance, focus on defending against cyber threats. This strategic orientation raises concerns about the **ethical and legal implications** of using cyber tools. But an increasing number of nation states see cyber capabilities as important instruments, and as weapons to be used in interstate conflicts. However, military and political decision-makers will have to pay close attention to the circumstances under which it is beneficial to use cyber weapons outside the ‘classic’ theater of military operations. There is the danger of **miscalculating** the result of cyber-attacks, thereby **escalating the conflict and triggering retaliation** outside cyberspace with conventional armaments.

Apart from these six types of cyber conflict, the term cyber-attack deserves particular notice. The word takes on a variety of meanings, according to the specific security fields. A precise and narrow definition would help **de-escalate** the rhetoric. In order to **reduce confusion and uncertainty** in a military context, the term cyber-attack should only be used to describe cyber conflicts with a military dimension. Their effects have to be significantly damaging: either disruptive (i.e. drastic, obvious and immediate) or corruptive (i.e. subtle and persistent).30 Consequently, only instances of cyber sabotage, cyber terrorism and cyber war(fare) should be identified as cyber-attacks.

It is important to define, **especially for NATO, what constitutes the use of force** through cyber technology. The Tallinn Manual on the International Law Applicable to Cyber Warfare, launched by NATO’s CCDCOE is not an Alliance directive, but provides guidance on the matter. It defines a militarily relevant cyber-attack as “a cyber operation, whether offensive or defensive, that is reasonably expected to cause injury or death to persons or damage or destruction to objects.”31 The definition is shaped by the result: if a cyber operation is followed by significant destructive consequences, it qualifies both as a cyber-attack and as use of force. If hostile cyber activity leads only to inconvenience or irritation, it is neither a cyber-attack nor the use of force. The fundamental understandings of this term have to be discussed because, in the end, the evaluation will be a political decision.

**2AC – NATO strat fails now**

**NATO strategy leaves the alliance vulnerable to attacks on satellites**

**Goud ND**

Naveen. Writer at Cybersecurity Insiders. “US and NATO Satellites are vulnerable to Russia and China Cyber Attacks” Cybersecurity Insiders. https://www.cybersecurity-insiders.com/us-and-nato-satellites-are-vulnerable-to-russia-and-china-cyber-attacks/

But now, new research conducted by a defense think tank says a different story. It’s believed that US and NATO command and control systems are themselves opening up their vulnerabilities to be **exploited by hackers being funded by their adversaries.** Yes, what you’ve read is absolutely true! Chatham House, a non-profit organization which helps the world understand international crisis has come up with the above-said conclusion after **analyzing different threat analytics related to space assets.** As attacks on satellites can **wreak havoc on communications** and strategic weapons, nations will for sure interested in intercepting them for their own means. It is a kind of modern warfare where vulnerabilities will be scanned to be exploited. Chatham House says that countries like Iran and North Korea do not have the expertise to launch such attacks. But **Russia and China have all the sophistication** to make things serious. As the United States is failing to cut down the influence of China and Russia on the world. It is on the verge of inviting a national security risk. Meanwhile, as the trade conflicts between China and Donald Trump are deteriorating with every passing day, China is alleged to have adopted an offensive cyber strategy by having state-sponsored hackers on a constant backdrop to retaliate to trade and security conflicts on an international note. As Military of every nation relies heavily on satellites, intercepting those related to certain countries can give an upper hand to adversaries during increasing tensions says the UK think tank. As nations are **relying heavily on cyber warfare**, satellites of US and NATO are termed to be **super-vulnerable to cyber attacks** by ‘The Royal Institute of International Affairs’. As it leads to a deep impact on decision making of how different operations are conducted, **proving fatal to military systems** which in-turn negatively influence the making of political decisions.

**2AC – Satellites Add-on**

**Satellites are vulnerable to cyberattacks---Russia and China are pushing the line**

**Lemos 19**

Robert. Veteran technology journalist of more than 20 years. Former research engineer. “Cybersecurity Experts Worry About Satellite & Space Systems” Dark Readings. 07-02-2019. https://www.darkreading.com/attacks-breaches/cybersecurity-experts-worry-about-satellite-and-space-systems/d/d-id/1335131

Information from satellites fuel a great deal of today's technology, from the intelligence gathering conducted by nation-states, to the global positioning system used for vehicle navigation, to the targeting used by "smart" weapons. Little surprise, then, that cybersecurity and policy experts worry that the relative insecurity of satellite systems **open them to attack.** In a paper released by The Royal Institute of International Affairs at the non-profit think-tank Chatham House, Beyza Unal, a senior research fellow in international security, warned that the reliance of space-based systems and satellites on civilian infrastructure means **greater vulnerability to attack** in times of conflict and espionage in times of peace. "During wartime, the greatest risk is to **lose operational foresight** and be unable to rely on data that comes through space," Unal says. "Receiving false or fake information may result in giving an advantage to the adversary." The warnings come as an increasing number of nations have ramped up their operations in space. What used to be a race between the United States and Russia has changed. China landed a rover on the moon in January and launched a quantum satellite into orbit in 2016. The European Space Agency has sent probes to Mars and put a gravitation wave detector into space. Japan launched a probe that successfully landed on a near-Earth asteroid and intends to bring back samples. A dozen nations have developed some level of space capability and have used it to launch satellites into space. The U.S. military, for example, relies on satellites to direct munitions. In 2003, during its engagement in Iraq, 68 percent of munitions were in some way guided by satellites or using intelligence from satellites, the Chatham House paper said. The importance of satellites make them a critical part of any nation's infrastructure and attacking those satellites a strategy that most nations need to consider. While kinetic attacks are possible, **cyber attacks have the benefit of being inexpensive.** "The most cost effective type of attack is the digital cyber vector," says John Sheehy, vice president of strategic services at IOActive, a security firm. "And, if you can disrupt satellite operations using cyber, unfortunately that greatly widens the pool of potential threat actors who have the capability to disrupt satellite operations." The Chatham paper pointed out that both China and Russia have both focused on **using cyber attacks as part of their military and strategic doctrine.** NATO has encountered GPS jamming and other cybersecurity attacks against satellite systems during military exercises, the report said, citing NATO officials, who attributed the attacks to Russia. Historically, satellite systems have only suffered occasional attacks over the past decade. In its 2011 Report to Congress, for example, the U.S.-China Economic and Security Review Commission noted that "in recent years, two U.S. government satellites have experience interference apparently consistent with the cyber exploitation of their control facility." The two satellites—identified as Landsat-7 and Terra EOS AM-1—each experienced two incidents of interference between October 2007 and October 2008 lasting a combined 35 minutes, according to the report. The outages were consistent with attacks against the satellites' land-based systems, but no positive evidence was found at the time. However, since that report, satellites have been both successfully exploited and attacked. A Russian cyber espionage group known as Turla—as well as at least two other groups—have used unencrypted satellite links as command-and-control and exfiltration channels for their operations. At last year's Black Hat conference, one security researcher used vulnerabilities in satellite equipment to hack into an airplane's in-flight communications equipment from the ground. Finally, Russia has frequently disrupted the global navigation satellite system (GNSS) for at least three years to prevent drone attacks and during times of military operations, such as its invasion of Crimea. The incidents have happened at least 9,883 times, according to research published earlier this year. "There is constant experimentation about pushing the envelope," says David Fidler, adjunct senior fellow for cybersecurity at the Council on Foreign Relations. "Because it is a cyber operation, we don't quite know where that line is yet. Countries are being cautious about it, but they are **pushing in that line more and more**." In the Chatham House paper, Unal points out that, while NATO owns some ground-based facilities and components, the group does not own its own satellites, but gets information from satellites from its member states. Typical attacks against such infrastructure includes the "five Ds"—attacks that disrupt, deny, degrade, deceive, and destroy. In addition to actual cyberattacks, vulnerabilities in satellite can undermine the faith that member nations have in the intelligence provided by NATO, raising questions about the root justifications for action as well as potentially **destabilizing the relationships between members**, the report stated.

**2AC – Heg ADV**

**2AC – AI key China rise**

**Emerging Tech is key to Chinese power projection**

**Haenel 18**

June, Fabio Haenel currently works at the Global and European Studies Institute, University of Leipzig. Fabio does research in Information Technology and Politics, Human Rights and Foreign Policy. “The Prospects and Dangers of Artificial Intelligence on International Security: The Case of a Sino-American Arms Race.”, <https://www.researchgate.net/publication/325542003_The_Prospects_and_Dangers_of_Artificial_Intelligence_on_International_Security_The_Case_of_a_Sino-American_Arms_Race> – ECM

In contrast to US-American pluralism fragmented between industrial and political interest groups in the ace of being torn at from both public debate and the deep state among the intelligence community, China’s growing centralization of its one-party government has recognized and internalized the of set potential of emerging technologies under the rule of President Xi more than any other nation-state. Nominally, the United States are holding an advantage in the numbers o high-tech startups and global corporations developing AI, an environment also nourished by long attracting the most eager and intelligent Chinese students to seek education at American campuses and thus feeding the need or talent in Silicon Valley and across the US to fill the telecommunications companies’ well-paid and highly competitive positions.136 But Beijing’s long-term attempts to push back US-American influence in the Greater Pacific region and to install China not only as a global economic power but a strategic power as well has recently been catalyzed by both heavy domestic and foreign investments in emerging technologies.

These include the **rapid modernization** of its naval and air force to gradually **expand China’s Anti-Access/Area-Denial** zone away from its coastal borders,137 diversifying their domestically manufactured and designed state-owned civil and military satellite systems and pioneering cutting-edge quantum telecommunications in space,138 as well as boosting Chinese telecommunications companies with favorable budget plans and topdown state policy changes to cater to the needs o their research and development departments but also by continuously denying foreign corporations to enter and capitalize on the quickly growing middle-class within China.

The growing volume of Chinese foreign investment in US-American high-tech startups and publicly-held telecom corporations led the Trump administration to tighten regulatory oversight to shield US-American intellectual property:140 “The Chinese have found a way around our protections, our safeguards, on technology transfer in foreign investment. And they’re using it to pull ahead of us, both economically and militarily,” James Lewis from the Center or Security and International Studies argues.141 China’s two-fold strategy to use its vast capital means to gain influence within foreign AI developers while cradling and catalyzing its own AI industry within China’s barred domestic economy accumulated in “The Internet Plus and Artificial Intelligence Plan (2016-18),” the world’s most broadly state-supported policy plan calling or breakthroughs in AI development and its “expansive applications, including in unmanned systems and cyber-security,” clearly exemplifying the securitized assessment o AI technology in the eyes of the Chinese government.

As part of the 13th Five-Year-Plan or the years 2016-2020 the Chinese governments’ Artificial Intelligence Plan represented a stepping stone between prioritizing its development on ministerial level as the sixth most important task or the country and enshrining it as part of China’s self -identity: The 2017 government work report, the Chinese Premier’s annual report to the People’s Congress on the past years’ economic performance and the coming years’ challenges featured Artificial Intelligence or the first time, stressing the need to divest funds into its adoption, followed by President Xi enshrining AI development as a **key driver to China’s hegemonic ambitions** to become a “science and technology superpower” in his opening speech to the 19th Party Congress in November 2017 ending with his reaffirmation as President.143 Precisely, the plan sets the national goal o expanding its AI industry to RMB 150 billion ($23.8 billion) gross output by 2020, a ten- fold increase from 2016, in an overall plan to be the world’s leader in AI development by 2025.144 By 2030, the plan envisions, the target gross output is set at RMB 1 trillion ($150 billion) in core AI industries innovating and developing the software architecture and hardware infrastructure and RMB 10 trillion ($1.5 billion) in adjacent AI-enhanced industries developing applications of automation in all sectors, e.g. self -driving vehicles. In context to various analyses of the global AI market these targets all are within the high end of market forecasts.

Experts argue that only the recent defeat of Korean Go master Lee Sedol in 2016 and the Chinese world-champion Ke Jie in 2017 at the hand of AlphaGo, Google’s own and arguably the world’s currently most powerful Artificial Intelligence, offered the Chinese officials as much a “Sputnik moment” as the first successful launch of a space probe by the Soviet Union posed to the US administration in 1957, calling or the immediate refocusing of funds and energy into the US space program thereafter.146 The Wuzhen Institute reported the biggest surge o searches on Baidu, China’s pendant to Google, on topics of AI immediately after the 2016 and 2017 Go-matches,147 followed by an increase in conferences and workshops held both in academia and in the military on the impact of AlphaGo’s victory on Chinese interests, including the People’s Liberation Army’s strategic planners.

In accordance with the monumental effort to modernize the PLA’s capabilities, in particular by researching, developing and producing nuclear-powered submarines, operational aircraft and helicopter carriers, as well as China’s first domestically produced passenger and cargo jet on top of its already successful modern generation of fighter jets, its leadership has closely studied the US Army’s concentration on autonomy and the Defense Department's proposed “Third Of set” strategy.149 In act, China’s efforts in researching and developing its own swarming-capable or solitary UAVs, semi-autonomous missile guiding systems, and the growing frequency and scope o the PLA’s practical mission experience borrow heavily from the strategic idea of asymmetrically of setting an otherwise quantitatively too powerful competitor through technological superiority.150 The government’s work report cites Lieutenant General Liu Ghuozhi, the Director of the Central Military Commission’s Science and Technology Commission, saying that whichever nation is “on the eve of a new scientific and technological revolution” **not prepared to engage in developing A**rtificial **I**ntelligence applications **for its military “will be disrupted**.

**Speed of AI development risk manipulation, arm racing, and ensures China challenge of US Heg.**

**Haenel 18**

June, Fabio Haenel currently works at the Global and European Studies Institute, University of Leipzig. Fabio does research in Information Technology and Politics, Human Rights and Foreign Policy. “The Prospects and Dangers of Artificial Intelligence on International Security: The Case of a Sino-American Arms Race.”, <https://www.researchgate.net/publication/325542003_The_Prospects_and_Dangers_of_Artificial_Intelligence_on_International_Security_The_Case_of_a_Sino-American_Arms_Race> – ECM

After all, it took Szilárd years to demonstrate the theoretical discovery of combusting controlled nuclear chain reactions in his lab but only a relatively insignificant time after that to create the first nuclear weapon.68 In 2014, the most optimistic forecast on AI beating human world champions in complex games was set not be ore a decade would run out, however, AlphaGo beat Ke Jie much earlier than that and long has taken over numerous other applications: “**Progress in AI has been much faster** [...] than most people expected.”69 Thus it is argued here that the rapid acceleration of development of **A**rtificial **I**ntelligence technology makes its adoption subjective to civil and strategic **manipulation** by private and state actors alike, prompting a technological landslide of societal changes **akin to the development of nuclear power** in the 1940s or the Industrial Revolution itself . Benefiting from an upward power trajectory and the parallel decline of U.S. global hegemony in the last decade the People’s Republic of **China will close the strategic gap to the U.S. by heavily investing in AI** research and development **challenging U.S. supremacy in the future**. This will usher in a **new arms race to deploy** fully automated weaponry on both sides of the Pacific and might **drastically change the geopolitical dynamics** of the international system in the unfolding century towards a bipolarity between Washington and Beijing. These developments threaten reckless AI adoption unable to be policed by civil authorities proactively, and thus needs to be prevented by proliferation on an international level.

**2AC – Sustainability Debate**

**Yes, Heg maybe in trouble – BUT it’s a self-inflicted wound. US unilateralism and distancing from NATO acts as root causes which the plan would resolve.**

* Ataman says distancing from NATO allies on key issues is the problem – SQ cant fix it – but the plan would spearhead a shift back to heg but establishing norms on AI

**Ataman** 9/29/20**21**

Prof. Muhittin Ataman graduated from the Faculty of Political Science in the Department of International Relations at Ankara University. “Global leadership crisis: The U.S. hegemony vs. China”, <https://www.dailysabah.com/opinion/columns/global-leadership-crisis-the-us-hegemony-vs-china> -- ECM

Today’s world is in both a comprehensive transition and a deep crisis. Not only do rivalries and enmities abound but today’s alliances are also quite vulnerable. The survival, duration **and sustainability** of all these alliances, rivalries and conflicts **are in question**. In other words, neither conflicting nor cooperative relations are sustainable over the long term. **All foreign policy activities are conducted on slippery ground**. That is, the direction and pace of any relationship may change at any time.

Therefore, when we analyze the current global balance of power, we have to take these conditions into consideration. No global power pursues a principled foreign policy orientation. Most countries follow an eclectic, sectoral and compartmentalized foreign policy. In this piece, I want to briefly analyze the current foreign relations tendencies of certain global powers.

Leadership crisis

Even though the United States **is the most powerful, influential and important international actor**, it faces difficulties in maintaining its global leadership. As U.S. relations with other leading global powers are in flux, **U.S. relations with its European allies are not sustainable**. The U.S. is neither comfortable with the current pace of global relations, nor it is able to change the pace of these events to accommodate its national interests.

In this context, it is interesting to examine U.S. relations with other influential actors. The U.S. prioritizes its relations with China, the most powerful challenger state to American hegemony.

Successive U.S. governments have not determined what kind of policy to follow toward China. For instance, only several days after President Joe Biden declared that the time for “relentless diplomacy” has begun, the U.S. announced a new alliance with Australia and the United Kingdom (AUKUS). The U.S. promises carrots but generally uses the stick in its relations with China.

On the other hand, the steps taken by the U.S. in the Indo-Pacific region **both directly and indirectly** **undermine its trans-Atlantic allegiances**. It seems that its European/**NATO allies will be of lesser importance for the U.S. for the foreseeable future**. However, it will continue to cooperate with European countries against the perceived threat from Russia, still the main "other" of the NATO alliance.

The relations between the U.S. and European Union are increasingly problematic. There are brief ups and downs, both alliance and rivalry, in their relationship. European countries do not share many concerns with the U.S. and vice versa. While European countries prioritize their relations with Russia, the U.S. prioritizes its relations with China.

Similarly, at a time when the U.S. president has declared that the U.S. is refocusing on international politics, the U.S. withdrew from Afghanistan and ended its 20-year invasion. The U.S. left the country to the Taliban regime, which it had overthrown 20 years ago. The U.S. continues to withdraw from certain crisis areas. Other global powers such as China and Russia began to fill the power vacuum created by the U.S. withdrawal.

The U.S. will eventually **lose ground** in international politics and it does not know how to reverse or even stop this damaging course. **It continues to follow unilateral policies that simply otherize its allies** causing them to lose their trust in the U.S. Its allies have been trying to diversify their relations by initiating a sectoral foreign policy understanding. Some of them have been trying to weigh in against the U.S. on certain issues.

**2AC – Heg Good: Transition Wars**

**Retrenchment triggers great-power aggression, spiraling proliferation, and nationalist takeover – heg is sustainable and pursuit is inevitable – it’s just a question of effectiveness**

**Wright 20**

Thomas, Director of the Center on the United States and Europe and a Senior Fellow in the Project on International Order and Strategy at the Brookings Institution, “The Folly of Retrenchment: Why America Can't Withdraw From the World.”, Foreign Affairs, Vol. 99, Iss. 2 DB

Global retrenchment is fast emerging as the most coherent and readymade alternative to the United States' postwar strategy. Yet pursuing it would be a grave mistake. **By dissolving U.S. alliances and ending the forward presence of U.S. forces, this strategy would destabilize the regional security orders in Europe and Asia**. **It would also increase the risk of nuclear proliferation, empower right-wing nationalists in Europe, and aggravate the threat of major-power conflict**. This is not to say that U.S. strategy should never change. The United States has regularly increased and decreased its presence around the world as threats have risen and ebbed. Even though Washington followed a strategy of containment throughout the Cold War, that took various forms, which meant the difference between war and peace in Vietnam, between an arms race and arms control, and between detente and an all-out attempt to defeat the Soviets. After the fall of the Soviet Union, the United States changed course again, expanding its alliances to include many countries that had previously been part of the Warsaw Pact. Likewise, the United States will now have to do less in some areas and more in others as it shifts its focus from counterterrorism and reform in the Middle East toward great-power competition with China and Russia. But advocates of global retrenchment are not so much proposing changes within a strategy as they are calling for the wholesale replacement of one that has been in place since World War II. What the United States needs now is a careful pruning of its overseas commitments--not the indiscriminate abandonment of a strategy that has served it well for decades. RETRENCHMENT REDUX Support for retrenchment stems from the view that the United States has overextended itself in countries that have little bearing on its national interest. According to this perspective, which is closely associated with the realist school of international relations, the United States is fundamentally secure thanks to its geography, nuclear arsenal, and military advantage. Yet the country has nonetheless chosen to pursue a strategy of "liberal hegemony," using force in an unwise attempt to perpetuate a liberal international order (one that, as evidenced by U.S. support for authoritarian regimes, is not so liberal, after all). Washington, the argument goes, has distracted itself with costly overseas commitments and interventions that breed resentment and encourage free-riding abroad. Critics of the status quo argue that the United States must take two steps to change its ways. The first is retrenchment itself: the action of withdrawing from many of the United States' existing commitments, such as the ongoing military interventions in the Middle East and one-sided alliances in Europe and Asia. The second is restraint: the strategy of defining U.S. interests narrowly, refusing to launch wars unless vital interests are directly threatened and Congress authorizes such action, compelling other nations to take care of their own security, and relying more on diplomatic, economic, and political tools. In practice, this approach means ending U.S. military operations in Afghanistan, withdrawing U.S. forces from the Middle East, relying on an over-the-horizon force that can uphold U.S. national interests, and no longer taking on responsibility for the security of other states. As for alliances, Posen has argued that the United States should **abandon the mutual-defense provision of NATO**, replace the organization "with a new, more limited security cooperation agreement," and **reduce U.S. commitments to Japan, South Korea, and Taiwan**. On the question of China, realists have split in recent years. Some, such as the scholar John Mearsheimer, contend that even as the United States retrenches elsewhere, in Asia, it must contain the threat of China, whereas others, such as Posen, argue that nations in the region are perfectly capable of doing the job themselves. Since Trump's election, some progressive foreign policy thinkers have joined the retrenchment camp. They diverge from other progressives, who advocate maintaining the United States' current role. Like the realists, progressive retrenchers hold the view that the United States is safe because of its geography and the size of its military. Where these progressives break from the realists, however, is on the question of what will happen if the United States pulls back. While the realists favoring retrenchment have few illusions about the sort of regional competition that will break out in the absence of U.S. dominance, the progressives expect that the world will become more peaceful and cooperative, because Washington can still manage tensions through diplomatic, economic, and political tools. The immediate focus of the progressives is the so-called forever wars--U.S. military involvement in Afghanistan, Iraq, Syria, and the broader war on terrorism--as well as the defense budget and overseas bases. Although the progressives have a less developed vision of how to implement retrenchment than the realists, they do provide some guideposts. **Stephen Wertheim**, a co-founder of the Quincy Institute, has called for bringing home many of the U.S. soldiers serving abroad, "leaving small forces to protect commercial sea lanes," as part of an effort to "deprive presidents of the temptation to answer every problem with a violent solution." He argues that U.S. allies may believe that the United States has been inflating regional threats and thus conclude that they do not need to increase their conventional or nuclear forces. Another progressive thinker, **Peter Beinart**, has argued that the United States should accept Chinese and Russian spheres of influence, a strategy that would include abandoning Taiwan. IS LESS REALLY MORE? The realists and the progressives arguing for retrenchment differ in their assumptions, logic, and intentions. The realists tend to be more pessimistic about the prospects for peace and frame their arguments in hardheaded terms, whereas the progressives downplay the consequences of American withdrawal and make a moral case against the current grand strategy. But they share a common claim: that the United States would be better off if it dramatically reduced its global military footprint and security commitments. This is a false promise, for a number of reasons. First, **retrenchment would worsen regional security competition in Europe and Asia**. The realists recognize that the U.S. military presence in Europe and Asia does dampen security competition, but they claim that it does so at too high a price--and one that, at any rate, should be paid by U.S. allies in the regions themselves. Although pulling back would invite regional security competition, realist retrenchers admit, **the United States could be safer in a more dangerous world because regional rivals would check one another**. **This is a perilous gambit, however, because regional conflicts often end up implicating U.S. interests**. **They might thus end up drawing the United States back in after it has left--resulting in a much more dangerous venture than heading off the conflict in the first place by staying**. **Realist retrenchment reveals a hubris that the United States can control consequences and prevent crises from erupting into war**. The progressives' view of regional security is similarly flawed. These retrenchers reject the idea that regional security competition will intensify if the United States leaves. In fact, they argue, U.S. alliances often promote competition, as in the Middle East, where U.S. support for Saudi Arabia and the United Arab Emirates has emboldened those countries in their cold war with Iran. **But this logic does not apply to Europe or Asia, where U.S. allies have behaved responsibly**. **A U.S. pullback from those places is more likely to embolden the regional powers**. **Since 2008, Russia has invaded two of its neighbors that are not members of NATO, and if the Baltic states were no longer protected by a U.S. security guarantee, it is conceivable that Russia would test the boundaries with gray-zone warfare**. **In East Asia, a U.S. withdrawal would force Japan to increase its defense capabilities and change its constitution to enable it to compete with China on its own, straining relations with South Korea**. **The second problem with retrenchment involves nuclear proliferation**. **If the United States pulled out of NATO or ended its alliance with Japan, as many realist advocates of retrenchment recommend, some of its allies, no longer protected by the U.S. nuclear umbrella, would be tempted to acquire nuclear weapons of their own**. Unlike the progressives for retrenchment, the realists are comfortable with that result, since they see deterrence as a stabilizing force. Most Americans are not so sanguine, and rightly so. There are good reasons to worry about nuclear proliferation: **nuclear materials could end up in the hands of terrorists**, **states with less experience might be more prone to nuclear accidents**, and **nuclear powers in close proximity have shorter response times and thus conflicts among them have a greater chance of spiraling into escalation**. Third, **retrenchment would heighten nationalism and xenophobia**. **In Europe, a U.S. withdrawal would send the message that every country must fend for itself**. **It would therefore empower the far-right groups already making this claim--such as the Alternative for Germany, the League in Italy, and the National Front in France--while undermining the centrist democratic leaders there who told their populations that they could rely on the United States and NATO**. As a result, Washington would lose leverage over the domestic politics of individual allies, particularly younger and more fragile democracies such as Poland. And **since these nationalist populist groups are almost always protectionist, retrenchment would damage U.S. economic interests, as well**. Even more alarming, many of the right-wing nationalists that retrenchment would empower have called for greater accommodation of China and Russia. A fourth problem concerns **regional stability after global retrenchment**. **The most likely end state is a spheres-of-influence system, whereby China and Russia dominate their neighbors, but such an order is inherently unstable**. **The lines of demarcation for such spheres tend to be unclear, and there is no guarantee that China and Russia will not seek to move them outward over time**. Moreover, the United States cannot simply grant other major powers a sphere of influence--the countries that would fall into those realms have agency, too. If the United States ceded Taiwan to China, for example, the Taiwanese people could say no. The current U.S. policy toward the country is working and may be sustainable. Withdrawing support from Taiwan against its will would plunge cross-strait relations into chaos. The entire idea of letting regional powers have their own spheres of influence has an imperial air that is at odds with modern principles of sovereignty and international law. A fifth problem with **retrenchment is that it lacks domestic support**. **The American people may favor greater burden sharing, but there is no evidence that they are onboard with a withdrawal from Europe and Asia**. As a survey conducted in 2019 by the Chicago Council on Global Affairs found, seven out of ten Americans believe that maintaining military superiority makes the United States safer, and almost three-quarters think that alliances contribute to U.S. security. A 2019 Eurasia Group Foundation poll found that over 60 percent of Americans want to maintain or increase defense spending. **As it became apparent that China and Russia would benefit from this shift toward retrenchment, and as the United States' democratic allies objected to its withdrawal, the domestic political backlash would grow**. **One result could be a prolonged foreign policy debate that would cause the United States to oscillate between retrenchment and reengagement, creating uncertainty about its commitments and thus raising the risk of miscalculation by Washington, its allies, or its rivals**. Realist and progressive retrenchers like to argue that the architects of the United States' postwar foreign policy naively sought to remake the world in its image. But the real revisionists are those who argue for retrenchment, a geopolitical experiment of unprecedented scale in modern history. **If this camp were to have its way, Europe and Asia--two stable, peaceful, and prosperous regions that form the two main pillars of the U.S.-led order--would be plunged into an era of uncertainty**.

**2AC – Heg Good AT: Endless War**

**No endless war impact.**

**Mazarr 20**

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US Foreign Policy: Caricature versus Reality

In the eyes of proponents of restraint, the reigning concepts that guide America’s role in the world embody a limitless drive for supremacy and power that has produced an infatuation with militarism and a litany of interventions and wars. “There is one dominant grand strategy in US politics,” two advocates for restraint **contend**, “which is primacy, also known as liberal hegemony.” 4 “The vast majority of US foreign policy makers are **devotees of primacy**,” concludes another recent essay. 5 The historian Stephen Wertheim refers to a post-Cold War US approach that “gave pride of place to military threats and methods” and that “spares no expense for military hegemony.” 6 The scholar Barry **Posen**, in one of the defining works of the restraint literature, points to an overriding implication: “the United States has grown **incapable of moderating its ambitions** in international politics.” 7

Immediately, this portrait of militarized liberal hegemony in search of primacy simplifies a more complex reality: the concepts of **primacy** and liberal **interventionism** overlap on some issues but diverge starkly on others. More importantly, much of the literature on restraint blends these **various concepts** in order to fuel what quickly becomes an **essentialist critique** of US foreign and security policy. Proponents argue that US policy is not merely imperfect at the margins—its basic **assumptions** and **impulses** are fundamentally unsound, and it must be not merely pruned but substantially uprooted. Yet, by depicting the **guiding concepts** of US policy with such **extreme** and **unconditional** language, these diagnoses tend to deal in **caricatures** and **straw people** rather than realities.

This polemical approach emerges in restraint proponents’ treatment of the basic US foreign policy record. It has had its share of excesses, but the record betrays far more **limits**, **hesitation**, and, in fact, **restraint** than the labels of **primacy** and **liberal hegemony** would suggest—something apparent in the **repeated tendency** to avoid **interventions**, major post-Cold War cuts in **defense spending** and global posture, and the constraints on **liberal value promotion**.

The Frequent Impulse to Moderation

The restraint literature downplays the often-**powerful reluctance** with which successive US administrations have grappled with most decisions to intervene. US action in cases like the **Balkan wars** and even **Libya** only came with great hesitancy and after fierce internal debates.8 The United States has shunned many opportunities for large-scale interventions in the last generation alone—in **Somalia**, **Rwanda**, **Syria**, and **elsewhere**.9 US administrations did not act in crises in the Great Lakes region of Africa and two major examples of Russian aggression in Georgia and Ukraine.10 An infamous case of non-intervention was the Darfur tragedy in the Sudan, when credible accusations of genocide did not prompt US action.11 The United States would never have invaded either **Afghanistan** or **Iraq** had it not been for 9/11; indeed, then-NSC official Richard Clarke and others begged two administrations to strike al-Qaeda camps in Afghanistan for months beforehand, to no avail.12 In regard to humanitarian intervention broadly speaking, the **selectivity of US action**, rather than a general impulse to intervene, is the **dominant** lesson.13

Even with regard to **Vietnam**, two US presidents (Kennedy and Eisenhower) struggled to avoid an **open-ended** US commitment; when the United States did engage, it was because Lyndon Johnson felt a need to stand up to communist aggression and protect his personal reputation, but he was hardly enthusiastic about the prospect. He was painfully conflicted about the war and deeply regretted having to fight it.14 In other words, when US interventionism has occurred, it has often been **reactive** and **halfhearted** rather than aggressively ambitious.

In fact, the **alleged epicenter** of US global military power—the **Department of Defense** and the **military services**—have forcefully opposed **many interventions** in places like the Balkans, Somalia, and Libya, believing they should [conserve] ~~husband~~ their power for major wars. The two leading modern conceptual articulations of criteria for going to war—the **Weinberger and Powell** **Doctrines**—came from **senior defense officials**, and both represented efforts to constrain, not liberate, the **use of force**.15 Former Secretary of Defense Robert Gates told a graduating class at West Point that “any future defense secretary who advises the president to again send a big American land army into Asia or into the Middle East or Africa should ‘have his head examined,’ as General MacArthur so delicately put it,” 16 reflecting a widely held view at Defense—one far afield from the ideas of unrestrained primacy. A similar impulse for limits has emerged in major diplomatic initiatives. In a recent essay outlining a restraint agenda, Stephen Wertheim suggests that the United States should “seek to normalize relations with North Korea” in part with a nuclear deal, and that it should “end its grudge match” with Iran.17 In fact, the United States at one time embraced both these ideas in the form of the Agreed Framework with North Korea and the Joint Comprehensive Plan of Action (JCPOA) with Iran. The later US desertion of these accords was prompted by hawkish factions in two Republican administrations, not an indiscriminate national hegemonic inclination.18

Nor can US involvement in foreign wars and interventions usually be traced to a hegemonic desire to spread liberal values. A missionary attitude in foreign policy and liberal value promotion agenda may help lay the groundwork or justify the public case for unnecessary commitments and may be responsible for a few of them. But the largest interventions—Korea, Vietnam, the Gulf War, the Balkan wars, Afghanistan, and Iraq—were all primarily motivated by security considerations.19 Some of these actions may have been excessive to begin with or become so over time, and the security concerns that drove them may have been based on bad information or inflated fears. But they were not fueled by the boundless commitment to primacy and liberal value promotion described by many advocates of restraint. Limits to Ambition: By the Numbers Broadly speaking, then, the **default setting** of US foreign policy is hardly one of fervent interventionism. In terms of actual military posture and spending, if the United States had truly embraced hegemonic policies, there would be a trajectory of continually rising **commitments**, military **spending**, and **interventions** since 1945. Yet the actual record is **starkly different**. Table 1 tells an interesting story about one key focus of the restraint proponents—global **military presence**. Between the late 1980s and roughly 2018, US troop levels **declined** slightly in **Japan**, more than 40 percent in **Korea**, and 80 percent in **Europe**. The result was that, as the Pew Research Center put it, by 2016 the “U.S. military overseas presence [was] at a 60-year low,” falling well below 200,000 after having reached a peak of 1.2 million in the late 1960s and remaining at over 600,000 as recently as 1990. In 2016, only 15 percent of active-duty US military troops were deployed overseas—the lowest proportion since 1957.21 One partial exception to this trend, of course, is the Middle East, where after a history of “extremely light force presence” 22 before 1990, US regional deployments expanded across the region in the wake of the Gulf War and ramped up dramatically during the Iraq War. Various factors—including the flow of units into and out of the region, the use of private contractors to fulfill some functions, and limits on public information—make it impossible to put a precise figure on US deployments; the Congressional Research Service has estimated that as of 2019, there were 60,000 to 80,000 US troops in the Central Command

**2AC – AT: LIO**

**Put away your LIO defense – China actions in AI are both offensive and defensive. China DOESN’T SEEK to replace LIO BUT its actions are signs that China intends to establish a multipolar world**

**Sullivan** 10/4/20**21**

Ryan Sullivan Army pilot studied at the prestigious Fudan University in Shanghai, China, as an Olmsted Scholar graduate-level work in the field of Artificial Intelligence to deliver an in-depth study of the critical elements of U.S.-China competition in Artificial Intelligence, “The U.S., China, and Artificial Intelligence Competition Factors”, <https://www.airuniversity.af.edu/Portals/10/CASI/documents/Research/Cyber/2021-10-04%20US%20China%20AI%20Competition%20Factors.pdf?ver=KBcxNomlMXM86FnIuuvNEw%3D%3D> – ECM

Very few countries benefitted more from the current international system than China. Many in the West worry about China’s efforts to undermine or replace the current system with one that better represents Chinese values and interests. **Those concerns are warranted**, though it is important to highlight that China purportedly does not seek to replace the current liberal world order or promote an alternative structure. Reviewing Chinese declarations about the standing world order indicates that the CCP reportedly finds its key elements more than acceptable, desiring to emphasize some key features that traditionally have been underplayed by the U.S. and other western countries. However, these claims or reports **should not be accepted at face value**, given the CCP and Xi’s history of backtracking on promises not to militarize the SCS. Rather, a prudent approach would be to assume that China is unwilling to disrupt the current world order at this point in history; however, as China strengthens its economy and pursues legitimacy on the global leadership stage, **China could pursue a restructuring of the** present **world order** from a position of greater strength.

Chinese Foreign Minister Wang Yi acknowledged the legitimacy and value of the current international system, which “is like a well-designed building with multilateralism as its cornerstone and the UN and other international organizations as important pillars” which plays “an irreplaceable role in promoting world peace and development.”387 Wu Xinbo adds that “China has been a strong supporter of Westphalian norms,” which he defined as “respect for sovereignty and territorial integrity of the nation-state, sovereign equality among states, non-aggression, and non-interference in internal affairs.”388 Wang, like other Chinese leaders, finds value in the aspects of the system that constrain world dominance by the United States or any single dominant state. China does value the system but feels it is suffering under U.S. leadership, as CASS researcher Xu Xiujun wrote in the lead-up to the National People’s Congress’s recent two sessions. Xu wrote,

“With the emergence of global problems and the rise of emerging economies, this system is increasingly difficult to meet the needs of the international community, and it seriously lacks in representativeness, fairness, legitimacy, and effectiveness. Under the obstruction of the United States and other Western powers, it is difficult for the World Trade Organization, International Monetary Fund, World Bank, and other traditional global multilateral mechanisms to make substantial progress in reforming and cannot adapt to the emerging fields of digital trade, digital finance, digital currency, and digital development.”

Xu adds the need for improved global governance mechanisms to effectively enable the G20 to play a constructive role and overcome “a small number of Western powers who ignore rules…and shirk their responsibilities” by promoting unilateralism and rely on small groups to resolve global problems.390 China’s willingness to co-opt certain aspects of international norms and laws while selectively ignoring others that run counter to their interests is a common practice. As China expert Elizabeth Economy points out, “Xi’s objective in promoting a China model and calling for reform of global governance institutions **are both defensive** – to protect China from international criticism – **and offensive** – to ensure that international norms and values align with and serve Chinese values and political and economic priorities.”391 However, China will not rush into reform and is very strategic where and when they apply their influence and pursue their values and interests. As Wu Xinbo notes, China wants to be a “rule-maker, not a rule-taker,” prioritizing “international economy and finance, regional cooperation, and emerging areas” such as AI, to further its international organization voting rights, to promote various forms of regional economic and security cooperation, and to establish mechanisms that serve Chinese interests and preferences.392 China’s desire to make the rules on AI demonstrates its clear desire to establish legitimacy beyond economics, pursuing political and technological power through influencing norms and standards globally.

**1AR – Heg Good: Transition Wars**

**Retrenchment causes nationalism, war, and protectionism – optimists falsely assume current cooperative trends will continue without the US security guarantee**

**Fay 17**

Matthew Director of Defense and Foreign Policy Studies @ The Niskanen Center, 11/16/17, “America Unrestrained?: Engagement, Retrenchment, and Libertarian Foreign Policy,” https://niskanencenter.org/wp-content/uploads/2017/11/America-Unrestrained.pdf

A number of the arguments libertarians make in favor of retrenchment have merit, but the cost-benefit analysis derived from them is based on a deterministic view of international politics. Libertarian retrenchers assume that international politics would remain more or less the same absent American engagement and that America’s domestic politics would remain the same even if the international system become more conflict-prone. Given the **inherent uncertainty of forecasting**, the costs and benefits of engagement and retrenchment need to be considered in a more probabilistic fashion.86 This section begins by exploring a number of scenarios that could occur should the United States adopt a grand strategy of retrenchment. It then reassesses the costs and benefits of retrenchment for a free society. In a system with more independent states balancing against one another, is war more or less likely? Libertarians are placing a bet that all else would remain equal in international politics if the United States retrenches. While they assume a world where an increased number of states are balancing against one another would remain peaceful, the reality is not entirely clear. Using basic realist premises about state behavior under international anarchy, it is easy to identify a number of scenarios less rosy than the one libertarians assume would occur should the United States retrench. These scenarios might include a world of **increased nationalism, eroding norms against military aggression, increased economic autarky, and the further spread of nuclear weapons as states look to produce security for themselves**. Some states may also fail to balance against threats in the wake of American retrenchment, increasing the likelihood the **U**nited **S**tates will be **drawn into a major war**. Libertarians assume that in the absence of an alliance with the United States, other countries would simply increase their defense spending if they felt threatened. However, internal balancing is not a mechanical process. According to John Mearsheimer, leaders of states facing security competition are likely to **use nationalism to garner support** from their populations for the necessary regeneration of military capabilities.87 Writing at the end of the Cold War, Mearsheimer suggested that Europe would revert to a pattern of recurrent warfare. The absence of the United States and the Soviet Union would leave Europe, once again, an anarchic multipolar system. The structure of the system would force the states to compete with one another, as they had prior to the Cold War. Mearsheimer argued that pre-1945 “hypernationalism” was a product of “security competition among the European states, which compelled elites to mobilize public support for national defense efforts.”88 American retrenchment could similarly lead to an anarchic, **multipolar Europe**—thus increasing the chances of war on the continent. Such a system could engender nationalist sentiments among the populations of Europe, heightening animosities between national groups. These heightened animosities could help erode norms against military aggression that have facilitated the decline in interstate war. Nationalist groups within a country can seize on these sentiments to pursue confrontational and expansionist policies.89 Encouraging support for increased military capabilities through nationalism might lead populations to see war as once again a means to national glory or maintaining national honor. Matters of national prestige and honor can lead to the initiation of wars when bound up in territorial claims, while at the same time increasing the intensity and duration of a conflict.90 Nationalism and security competition might also **erode the pacifying effects of economic openness**. Realism suggests states are concerned about relative gains.91 States in security competition might be wary of trading with one another due to concerns about how a potential rival’s economic gains might provide it with an advantage if translated into military power. They may also adopt autarkic policies for fear of undermining their economic and military self-sufficiency.92 Territorial conquest has become increasing anachronistic in international politics. However, the proliferation of protectionist policies might once again make aggression and preventive war seem like strategically sensible ways for states to secure the resources necessary to reduce the ability of potential rivals to cut them off economically. If the risk of territorial aggression increases, the possession of nuclear weapons would become an attractive option for some states whose security was previously guaranteed by the United States. Nuclear weapons are most useful for deterring major territorial aggression, meaning their potential utility increases as the potential for war does.93 A number of U.S. allies have either previously pursued nuclear weapons or have the capability to do so. They might choose to obtain a nuclear arsenal once responsible for their own security.

**Yes transition wars – realism makes it inevitable**

**Zarnett 17**

(David, University of Toronto, “What Does Realist Foreign Policy Activism Tell Us About Realist Theory?”, Foreign Policy Analysis, Vol. 13) DB

Mearsheimer’s critique of Waltz’s is premised on the idea that international outcomes cannot be explained without explaining state behavior, especially the behavior of six great powers during the nineteenth and twentieth centuries: Japan from 1868 to 1945, Germany from 1862 to 1945, the Soviet Union from 1917 to 1991, Italy from 1861 to 1945, Great Britain from 1792 to 1945 and the United States from 1800 to 1990. In examining the policies of these **great powers**, Mearsheimer finds that they **consistently select offensive policies, taking advantage of opportunities to increase their power and achieve regional, and potentially international, hegemony**. In distinguishing his view from other realist theories, Mearsheimer explains that offensive realists “believe that status quo powers are rarely found in world politics, because the international system creates powerful incentives for states to look for opportunities to gain power at the expense of rivals, and to take advantage of those situations when the benefits outweigh the costs. **A state’s ultimate goal is to be the hegemon in the system**” (Mearsheimer 2001:21). In other words, **the dominant pattern in international politics is not a recurring balance of power but rather the constant drive for hegemony by great powers**. **By pursuing offensive strategies, states act in concert with what the system demands of them**. Mearsheimer claims that his theory is “mainly a descriptive theory.” Depicting Waltz’s theory as a theory of how states ought to act enables him to present offensive realism as a more empirically valid substitute. But Mearsheimer does not leave it there. He also notes that his offensive realism “is also a prescriptive theory.” That is, it not only asserts that **great powers are “primed for offense” but also that they are right in doing so**. **The more powerful a rational state is relative to the other states in the system, the less likely it is that a reckless state would attack it**. **There is no guarantee that a state prone to foolish behavior would not start a losing war, but it is less likely if that potential aggressor is badly outgunned**. **Plus, if deterrence fails and there is a war, the rational state would be well positioned to win it quickly and decisively**. Finally, a rational state that is the preponderant power in the system is likely to be able to contain a misguided aggressor by itself and not need a balancing coalition to do the job. This takes the problem of inefficient balancing off the table, as the rational state no longer has to worry about unreliable allies. (Mearsheimer 2009:252) Noting that states can act in foolish ways, Mearsheimer writes that “states should behave according to the dictates of offensive realism, because it outlines the best way to survive in a dangerous world” (Mearsheimer 2001:11–12). If his goal were to develop a scientific theory of how states do behave, a different approach to state behavior would have been taken based on identifying the conditions under which states act offensively or defensively (Snyder 2002:173). But, Mearsheimer’s goal was to provide a realist theory of state behavior which, to remain consistent with realist tradition, includes a prescriptive component. In this tradition, theorizing is not simply for explanation’s sake. While good explanation is important, it is often sacrificed for good prescription. The result is a theory of international politics that uses a selection of state behaviors to identify the types of policies and strategies that increase the chances of success. While Mearsheimer’s prescription raises question about his theory’s empirical validity, as well as its methodological and ontological positions, it is overall remarkably consistent with the realist tradition. As Robert Gilpin explains, it is a “dual commitment, to practice and to theory, that sets realism apart from idealism and the abstract theorizing that characterizes so much of the contemporary study of international relations” (Gilpin 1984:303).

**2AC – US-China Coop ADV**

**2AC – AT: US – China coop dead**

**Yes, relations are low – BUT, redefining the relationship toward cooperation solves**

**Haenle & Bresnick 2/21**/2022

**Complicating matters further**, **the U.S. and Chinese publics are increasingly distrustful of each other**. A whopping 89 percent of American respondents to a recent survey from the Pew Research Center consider China a competitor or enemy, while around two-thirds of Chinese respondents view the United States unfavorably or very unfavorably. Such negative mutual perceptions would likely hamper each side’s ability to recalibrate its approach to the other.

Finally, the two sides’ divergent framings of the relationship are contributing to the ongoing stalemate. Discussions with high-level Chinese scholars and former government officials have revealed that Beijing prefers to define the bilateral relationship as a peaceful coexistence guided by shared principles, consensus, and possible cooperation. **China is frustrated** that the United States is more focused on **competing with** **and confronting** Beijing. In Washington, however, great power rivalry, defined more by competition and confrontation than cooperation, **has become the central framework for bilateral ties**.

**2AC – AT: Defense (Long)**

**It’s easily possible and doesn’t require AGI**

Karina **Vold &** Daniel R. **Harris 21**, Vold is a philosopher of cognitive science and artificial intelligence & an assistant professor at the University of Toronto's Institute for the History and Philosophy of Science and Technology; Harris is a retired lawyer and Foreign Service Officer at the US Department of State, “How Does Artificial Intelligence Pose an Existential Risk?,” Oxford Handbook of Digital Ethics, Ed. C. Veliz., pp 1-34

3. The Control Problem Argument for Xrisk

The earliest line of thinking that AI poses an Xrisk warns that AI might become both **powerful** and **indifferent to human values**, leading to **dangerous consequences** for human beings. Despite it being a longstanding concern, the structure of this argument is rarely, if ever, explicitly laid out.3 By presenting the control problem argument for Xrisk (henceforth CPAX) in this way, our aim is to capture what we understand to be the line of reasoning while also making the epistemic moves more explicit.

CPAX rests on two central theses: the Orthogonality Thesis and the Instrumental Convergence Thesis, both of which were first explicitly articulated by Bostrom (2012, 130-132; 2014).

Orthogonality Thesis: The intelligent capacities of any system are logically independent from any goals the system might have.

Instrumental Convergence Thesis: Almost any intelligent system is likely to converge upon certain instrumental (sub)goals.

We will discuss each of these theses, as well as the premises and central inferences of the argument (below) in §3.1–§3.4.

P1. It is possible to build an AI system that has a decisive strategic advantage over all other forms of intelligence.

P2. If an AI system has a decisive strategic advantage over human intelligence, then we may not be able to control that system.

C1. It is possible to build an AI system that we are not able to

control (from P1 and P2).

P3. The intelligent capacities of an AI system are logically independent from any goals the system might have (supported by the Orthogonality Thesis).

C2. Therefore, it is possible to build an AI system that human beings are not able to control and that has goals that do not align with human values (from C1 and P3).

P4. AI systems are likely to converge upon certain instrumental (sub)goals that are inimical to human interests (supported by the Instrumental Convergence Thesis).

C3. It is possible to build AI systems that pose an existential threat to humanity (from C2 and P4).

This reconstruction of the argument is by no means uncontroversial, and we will discuss some of the disagreements and objections as we go through the argument.

3.1 Intelligence Explosion and Decisive Strategic Advantages

P1 states that it is possible to build an AI system that has a **decisive strategic advantage** over **all other** forms of **intelligence** (including human intelligence). Historically, CPAX was introduced as arising from an intelligence explosion that would lead to the creation of a superintelligent AI—a system that by definition has a decisive strategic advantage over human intelligence. More recently, some have argued that an intelligence explosion is not the only pathway to AI gaining a decisive strategic advantage. We will begin by explaining the pathway to a loss of control over AI (C1) from an intelligence explosion (in this section, §3.1) and consider some potential objections (§3.1.1). We will then, in §3.2, discuss P2 and some more contemporary takes on how C1 could result.

An intelligence **explosion** is a hypothetical event in which an AI system enters a **rapid** cycle of **recursive self-improvement**, whereby each new iteration creates a **more intelligent version** of itself, culminating in the creation of a **superintelligence**. Here, a superintelligence is “any intellect that greatly exceeds the cognitive performance of humans in virtually all domains of interest” (Bostrom 2014, 22). The concept of an intelligence explosion was first articulated by I.J. Good (1965, 33), who argued that an AI system whose intelligence exceeds humanity’s in all intellectual activities would necessarily also exceed it in terms of designing machine intelligence. Hence, if such a system were initially engineered by humans, it would possess the capability to design a machine more intelligent than itself. The subsequent new iteration, being more intelligent than its predecessor, would by the same logic also be capable of **design**ing a machine more intelligent than itself. If each new generation of AI were to utilize its improved design capability, an intelligence explosion would occur (Chalmers, 2010).

Importantly, an intelligence explosion need not begin with the creation of a machine with **greater than human** intelligence, as Good’s argument suggests. In principle, it **could** be sparked via the creation of a more **modest** type of machine intelligence. Some might hold, for example, that an intelligence explosion merely requires a system with artificial general intelligence, where general intelligence is the ability to deploy the same core suite of cognitive resources to complete a wide range of different tasks (Shevlin et al., 2019). An even more modest possibility is that an intelligence explosion could spark from a mere artificial **narrow** intelligence, that is, a system that excels **only** at **specific tasks** and lacks the ability to use its resources to solve problems outside of its narrow domains.4 Bostrom (2014, 29), for example, suggests that a system “capable of improving its own architecture”, what he calls a “seed AI”, would be a sufficient starting point. For example, DeepMind’s AlphaZero, a current narrow AI system, has already shown the capacity to iteratively self-improve by repeatedly playing against itself. This illustrates how, under certain conditions, this process of recursive self- improvement might generate an intelligence explosion that begins from a mere narrow AI, in particular, any narrow AI system that enjoys a decisive strategic advantage (i.e., well above human level capacity) in some relevant domains, coupled with sufficient capacities for real-world modification.5,6

**Prefer our ev:**

**1. Profit motive**

Seth D. **Baum 18**, Global Catastrophic Risk Institute, “Superintelligence Skepticism as a Political Tool,” 09/2018, Information, vol. 9, no. 9, p. 209

As is discussed in more detail below, certain factors suggest the potential for superintelligence to be a **focus of risk–profit politicized skepticism**. First and foremost, superintelligence could be developed by **major corporations** with a strong **financial** incentive to **avoid regulation**. Second, there **already** exists a lot of skepticism about superintelligence, which could be **exploited** for **political purposes**. Third, as an unprecedented class of technology, it is **inherently** uncertain, which suggests that superintelligence skepticism may be especially **durable**, even within apolitical scholarly communities. These and other factors do not guarantee that superintelligence skepticism will be politicized, or that its politicization would follow the same risk–profit patterns as the tobacco strategy. However, these factors are at least **suggestive** of the possibility.

Superintelligence skepticism may also be politicized in a different way: to protect the **reputations and funding of the** broader **AI field**. This form of politicized skepticism is less well-documented than the tobacco strategy, and appears to be less common. However, there are at least **hints** of it for fields of technology involving both grandiose future predictions and more mundane near-term work. AI is one such field of technology, in which grandiose predictions of superintelligence and other future AI breakthroughs contrast with more modest forms of near-term AI. Another example is nanotechnology, in which grandiose predictions of molecular machines contrast with near-term nanoscale science and technology [3].

**2. Empirics**

Allan **Dafoe &** Stuart **Russell 16**, Dafoe is an assistant professor of political science at Yale University; Russell is a professor of computer science at the University of California, Berkeley, “Yes, We Are Worried About the Existential Risk of Artificial Intelligence,” MIT Technology Review, 11-02-16, https://www.technologyreview.com/s/602776/yes-we-are-worried-about-the-existential-risk-of-artificial-intelligence/

Etzioni then repeats the dubious argument that “doom-and-gloom predictions often fail to consider the potential **benefits** of AI in preventing medical errors, reducing car accidents, and more.” The argument does not even apply to Bostrom, who predicts that success in controlling AI will result in “a compassionate and jubilant use of humanity’s cosmic endowment.” The argument is also **nonsense**. It’s like arguing that **nuclear engineers** who **analyze** the possibility of **meltdowns** in nuclear power stations are **“failing to consider** the potential benefits” of **cheap electricity**, and that because nuclear power stations might one day generate really cheap electricity, we should **neither mention, nor work on preventing**, the possibility of a **meltdown**.

Our experience with Chernobyl suggests it may be **unwise** to claim that a powerful technology entails **no risks**. It may also be unwise to claim that a powerful technology **will never come to fruition**. On September 11, 1933, Lord **Rutherford**, perhaps the world’s most eminent nuclear physicist, described the prospect of extracting energy from atoms as nothing but **“moonshine.”** Less than **24 hours later**, Leo **Szilard** invented the neutron-induced **nuclear chain reaction**; detailed designs for nuclear reactors and **nuclear weapons** followed a few years later. Surely it is better to **anticipate** human ingenuity than to **underestimate** it, better to acknowledge the risks than to deny them.

**Control failures guarantee every scenario for extinction**

Karina **Vold &** Daniel R. **Harris 21**, Vold is a philosopher of cognitive science and artificial intelligence & an assistant professor at the University of Toronto's Institute for the History and Philosophy of Science and Technology; Harris is a retired lawyer and Foreign Service Officer at the US Department of State, “How Does Artificial Intelligence Pose an Existential Risk?,” Oxford Handbook of Digital Ethics, Ed. C. Veliz., pp 1-34

4.1 AI Race Dynamics: Corner-cutting Safety

An AI **race** between powerful actors could have an **adverse effect** on AI **safety**, a subfield aimed at finding technical solutions to building “advanced AI systems that are **safe** and **beneficial**” (Dafoe, 2018, 25; Cave & Ó hÉigeartaigh, 2018; Bostrom, 2017; Armstrong et al., 2016; Bostrom, 2014). Dafoe (2018, 43), for example, argues that it is plausible that such a race would provide strong incentives for researchers to **trade-off safety** in order to increase the chances of gaining a **relative advantage** over a competitor.21 In Bostrom’s (2017) view, competitive races would disincentivize two options for a frontrunner: (a) slowing down or pausing the development of an AI system and (b) implementing safety-related performance handicapping. Both, he argues, have worrying consequences for AI safety.

(a) Bostrom (2017, 5) considers a case in which a solution to the control problem (C1) is dependent upon the components of an AI system to which it will be applied, such that it is only possible to invent or install a necessary control mechanism after the system has been developed to a significantly high degree. He contends that, in situations like these, it is vital that a team is able to pause further development until the required safety work can be performed (ibid). Yet, if implementing these controls requires a substantial amount of additional time and resources, then in a tight competitive race dynamic, any team that decides to initiate this safety work would likely surrender its lead to a competitor who forgoes doing so (ibid). If competitors don’t reach an agreement on safety standards, then it is possible that a “risk-race to the bottom” could arise, driving each team to take increasing risks by investing minimally in safety (Bostrom, 2014, 247).

(b) Bostrom (2017, 5-6) also considers possible scenarios in which the “mechanisms needed to make an AI safe reduces the AI’s effectiveness”. These include cases in which a safe AI would run at a considerably slower speed than an unsafe one, or those in which implementing a safety mechanism necessitates the curtailing of an AI’s capabilities (ibid). If the AI race were to confer large strategic and economic benefits to frontrunners, then teams would be disincentivized from implementing these sorts of safety mechanisms. The same, however, does not necessarily hold true of less competitive race dynamics; that is, ones in which a competitor has a significant lead over others (ibid). Under these conditions, it is conceivable that there could be enough of a time advantage that frontrunners could unilaterally apply performance handicapping safety measures without relinquishing their lead (ibid).

It is relatively uncontroversial to suggest that reducing investment in AI safety could lead to a host of associated dangers. Improper safety precautions could produce **all kinds** of unintended harms from **misstated objectives** or from **specification gaming**, for example. They could also lead to a higher prevalence of AI **system vulnerabilities** which are **intentionally exploited** by **malicious actors** for destructive ends, as in the case of adversarial examples (see Brundage et al., 2018). But does AI safety corner-cutting reach the threshold of an Xrisk? Certainly not directly, but there are at least some circumstances under which it would do so indirectly. Recall that Chalmers (2010) argues there could be **defeaters** that **obstruct** the **self-amplifying** capabilities of an advanced AI, which could in turn forestall the occurrence of an intelligence explosion. Scenario (a) above made the case that a competitive AI **race** would **disincentivize** researchers from investing in developing safety precautions aimed at preventing an intelligence explosion (e.g., motivational defeaters). Thus, in cases in which an AI race is centred on the development of artificial general intelligence, a **seed AI** with the capacity to self-improve, or even an advanced narrow AI (as per §3.1), a competitive race dynamic could pose an **indirect Xrisk** insofar as it contributes to a set of conditions that **elevate the risk of a control problem** occurring (Bostrom, 2014, 246; 2017, 5).

4.2 AI Race Dynamics: Conflict Between AI Competitors

The **mere** narrative of an AI **race** could also, under certain conditions, increase the risk of **military** conflict between competing groups. Cave & Ó hÉigeartaigh (2018) argue that AI race narratives which frame the future trajectory of AI development in terms of technological advantage could “increase the risk of competition in AI causing real conflict (overt or covert)”. The militarized language typical of race dynamics may encourage competitors to view each other “as threats or even enemies” (ibid, 3).22 If a government believes that an adversary is pursuing a strategic advantage in AI that could result in their technological dominance, then this alone could provide a motivating reason to use aggression against the adversary (ibid; Bostrom, 2014). An AI race narrative could thus lead to **crisis escalation** between states. However, the resulting conflict, should it arise, need not directly involve AI systems. And it's an open question whether said conflict would meet the Xrisk threshold. Under conditions where it does (perhaps **nuclear war**), the contributions of AI as a technology would at best be indirect.

4.3 Global Disruption: Destabilization of Nuclear Deterrents

Another type of crisis escalation associated with AI is the potential destabilizing impact the technology could have on global strategic stability;23 in particular, its capacity to destabilize **nuclear deterrence** strategies (Giest & Lohn, 2018; Rickli, 2019; Sauer, 2019; Groll, 2018; Zwetsloot & Dafoe, 2019). In general, deterrence relies both on states possessing secure second-strike capabilities (Zwetsloot & Dafoe, 2019) and, at the same time, on a state's inability to locate, with certainty, an adversary’s nuclear second-strike forces (Rickli, 2019). This could change, however, with advances in AI (ibid). For example, AI-enabled surveillance and reconnaissance systems, unmanned underwater vehicles, and data analysis could allow a state to both closely track and destroy an adversary’s previously hidden nuclear-powered ballistic missile submarines (Zwetsloot & Dafoe, 2019). If their second-strike nuclear capabilities were to become **vulnerable** to a first strike, then a pre- emptive nuclear strike would, in theory, become a viable strategy under certain scenarios (Giest & Lohn, 2018).

In Zwetsloot & Dafoe’s (2019) view, “the fear that nuclear systems could be insecure would, in turn, create pressures for states— including defensively motivated ones—to **pre-empt**ively escalate during a crisis”. What is perhaps most alarming is that the aforementioned AI systems need not actually exist to have a destabilizing impact on nuclear deterrence (Rickli, 2019; Groll, 2018; Giest & Lohn, 2018). As Rickli (2019, 95) points out, “[b]y its very nature, nuclear deterrence is highly psychological and relies on the perception of the adversary’s capabilities and intentions”. Thus, the “simple **misperception** of the adversary’s AI capabilities is destabilizing in itself” (ibid). This potential for AI to destabilize nuclear deterrence represents yet **an**other kind of indirect global catastrophic, and perhaps even **existential**, **risk** insofar as the destabilization could contribute to nuclear conflict escalation.

5. Weaponization of AI

Much like the more recent set of growing concerns around an AI arms race, there have also been growing concerns around the weaponization of AI. We use “weaponization” to encompass many possible scenarios, from malicious actors or a malicious AI itself, to the use of fully autonomous lethal weapons. And we will discuss each of these possibilities in turn. In §5.1 we discuss malicious actors and in §5.2 we discuss lethal autonomous weapons. We have combined this diverse range of scenarios for two reasons. First, while the previous Xrisk scenarios discussed (CPAX and an AI race) could emerge without malicious intentions from anyone involved (e.g., engineers or governments), the scenarios we discuss here do for the most part assume some kind of malicious intent on the part of some actor. They are what Zwetsloot & Dafoe (2019,) call a misuse risk. Second, the threats we discuss here are not particularly unique to AI, unlike those in previous sections. The control problem, for example, is distinctive of AI as a technology, in the sense that the problem did not exist before we began building intelligent systems. On the other hand, many technologies can be weaponized. In this respect, AI is no different. It is because AI is potentially so powerful that its misuse in a complex and high impact environment, such as warfare, could pose an Xrisk.

5.1 Malicious Actors

In discussing CPAX, we focused on accidental risk scenarios—where no one involved wants to bring about harm, but the mere act of building an advanced AI system creates an Xrisk. But AI could also be deliberately misused. These can include things like exploiting software vulnerabilities, for example, through automated hacking or adversarial examples; generating political discord or misinformation with synthetic media; or initiating physical attacks using drones or automated weapons (see Brundage et al., 2018). For these scenarios to reach the threshold of Xrisk (in terms of ‘scope’), however, a **beyond catastrophic amount of damage** would have to be done. Perhaps one instructs an AI system to suck up **all the oxygen in the air**, to launch **all** the **nuc**lear weapon**s** in a nation’s arsenal, or to invent a **deadly airborne biological virus**. Or perhaps a **lone actor** is able to use AI to hack **critical infrastructures**, including some that manage large-scale projects, such as the satellites that orbit Earth. It does not take much creativity to drum up a scenario in which an AI system, if put in the **wrong hands**, could pose an **Xrisk**. But the Xrisk posed by AI in these cases is likely to be indirect—where AI is just one link in the causal chain, perhaps even a distal one. This involvement of malicious actors is one of the more common concerns around the weaponization of AI. Automated systems that have war- fighting capacities or that are in anyway linked to nuclear missile systems could become likely targets of malicious actors aiming to cause widespread harm. This threat is serious, but the theoretical nature of the threat is straightforward relative to those posed in CPAX, for example.

One further novel outcome of AI would be if the system itself malfunctions. Any technology can malfunction, and in the case of an AI system that had control over real-world weapons systems the consequences of a malfunction could be severe (see Robillard, this volume). We’ll discuss this potential scenario a bit more in the next section. A final related possibility here would be for the AI to itself turn malicious. This would be unlike any other technology in the past. But since AI is a kind of intelligent agent, there is this possibility. Cotton- Barratt et al. (2020), for example, describe a hypothetical scenario in which an intelligence explosion produces a powerful AI that wipes out human beings in order to pre-empt any interference with its own objectives. They describe this as a direct Xrisk (by contrast, we described CPAX scenarios as indirect), presumably because they describe the AI as deliberately wiping out humanity. However, if the system has agency in a meaningful sense, such that it is making these kinds of deliberate malicious decisions, then this seems to assume it has something akin to consciousness or strong intentionality. In general we are far from developing anything like artificial consciousness and this is not to say that these scenarios should be dismissed altogether, but many experts agree that there are serious challenges confronting the possibility of AI possessing these cognitive capacities (e.g., Searle, 1980; Koch and Tonini, 2017; Koch, 2019; Dehaene et al., 2017).

5.2 Lethal Autonomous Weapons

One other form of weaponization of AI that is sometimes discussed as a potential source of Xrisk are lethal autonomous weapons systems (LAWS). LAWS include systems that can locate, select, and engage targets without any human intervention (Roff, 2014; Russell, 2015; Robillard, this volume). Much of the debate around the ethics of LAWS has focused on whether their use would violate human dignity (Lim, 2019; Rosert & Sauer, 2019; Sharkey, 2019), whether they could leave critical responsibility gaps in warfare (Sparrow, 2007; Robillard, this volume), or whether they could undermine the principles of just war theory, such as noncombatant immunity (Roff, 2014), for example. These concerns, among others, have led many to call for a ban on their use (FLI ,2017). These concerns are certainly very serious and more near term (as some LAWS already exist) than the speculative scenarios discussed in CPAX. But do LAWS really present an Xrisk? It seems that if they do, they do so indirectly. Consider two possible scenarios.

(a) One concern around **LAWS** is that they will ease the **cost** of engaging in **war**, making it more likely that **tensions** between rival states rise to **military engagement**. In this case, LAWS would be used as an instrument to carry out the ends of some malicious actor. This is because, for now, humans continue to play a significant role in directing the behaviour of LAWS, though it is likely that we will see a steady increase in the autonomy of future systems (Brundage et al., 2018). Now, it could be that this kind of warfare leads to Xrisks, but this would require a causal chain that includes political disruption, perhaps failing states, and widespread mass murder. None of these scenarios are impossible, of course, and they present serious risks. But we have tried to focus this chapter on Xrisks that are novel to AI as a technology and, even though we view the risks of LAWS as extremely important, they ultimately present similar kinds of risks as nuclear weapons do. To the extent that LAWS have a destabilizing impact on norms and practices in warfare, for example, we think that scenarios similar to those discussed in §4.3 are possible—LAWS might escalate an ongoing crisis, or moreover, the mere perception that an adversary has LAWS might escalate a crisis.

(b) A second scenario, described by Geoffrey Hinton, is that **killer drones**, equipped with explosives and deep learning neural net technology, could (somehow) learn to function **independently** of their **human controllers** (Robinson, 2016), and the system could then **go on a rampage** and **destroy humanity**. The bracketed “somehow” here is a critical piece of the story. Perhaps the control system has been **hack**ed, in which case we are back to the malicious actor scenario described in §5.1. Or perhaps there is a **malfunction**, of the sort also described in §5.1. In this latter case, the malfunction could manifest in the form of a “hard takeoff” in which the system undergoes rapid recursive self-improvement (unintended by the designers) and then develops goals that are inimical to human interests. In such a case, we would be at the start of an intelligence explosion and would confront the kind of Xrisk already characterized by CPAX (§3). Our only point here is that upon closer examination, it's hard to see how this scenario looks distinct from ones previously discussed. Hence, the weaponization of AI can pose an indirect Xrisk in several different ways. In general, the more control an automated system has over weaponized systems that can cause real-world destruction, the greater risk there is of that system becoming a target for attack by malicious actors or of there being greater harm due to any accidental system malfunction.

6. Conclusion

Humanity is facing an **increasing** number of **existential threats**, many of which are of our **own creation**. Thankfully, there are also an increasing number of **scholars**, from a wide range of fields, **studying the nature of these risks** and **strategizing how to mitigate them**. But the field of Xrisk studies is still relatively young. There are significant debates being had over how to define the concept of Xrisk, how to understand its sources, and what methodologies should be used to assess these risks. When it comes to Xrisks from AI, these debates continue. Early concerns around **AI Xrisks** focused on the possibility of an **intelligence explosion** and the subsequent pathway to a scenario in which a powerful superintelligent AI has misaligned objectives from humanity. These concerns have **not gone away**, but they have **evolved** over time. This chapter has provided an up- to-date critical survey of these arguments, both old and new, looking at different foreseeable pathways towards AI Xrisk, possible global disruptions resulting from the emergence of an AI race dynamic between nations, and the weaponization of AI. In particular, we have tried to make the structures of each of these concerns more explicit, such that readers can begin to critically engage with them.

**Good AI invents solutions to present AND speculative future risks---but regs are key**

Toby **Ord 20**, Senior Research Fellow in Philosophy at Oxford University, “5. Future Risks,” The Precipice: Existential Risk and the Future of Humanity, First edition, Hachette Books, 2020, pp. 121–158

Even if these arguments for risk are entirely wrong in the **particulars**, we should pay **close attention** to the development of AGI as it may bring other, **unforeseen**, risks. The transition to a world where **humans** are **no longer the most intelligent entities on Earth** could easily be the **greatest ever change in humanity’s place in the universe**. We shouldn’t be surprised if events surrounding this transition **determine** how our **longterm future** plays out— **for better or worse**.

One key way in which AI could help **improve** humanity’s longterm future is by offering **protection** from the **other existential risks** we face. For example, AI may enable us to find solutions to **major risks** or to identify **new** risks that would have **blindsided** us. AI may also help make our longterm future **brighter than anything that could be achieved without it**. So the idea that developments in AI **may** pose an **ex**istential risk is **not** an **arg**ument for **abandoning** AI, but an argument for proceeding with due **caution**.

The case for existential risk from AI is clearly speculative. Indeed, it is the most speculative case for a major risk in this book. Yet a speculative case that there is a large risk can be more important than a robust case for a very low-probability risk, such as that posed by asteroids. What we need are ways to judge just how speculative it really is, and a very useful starting point is to hear what those working in the field think about this risk.

Some outspoken AI researchers, like Professor Oren Etzioni, have painted it as “very much a fringe argument,” saying that while luminaries like Stephen Hawking, Elon Musk and Bill Gates may be deeply concerned, the people actually working in AI are not.103 If true, this would provide good reason to be skeptical of the risk. But even a cursory look at what the leading figures in AI are saying shows it is not.

For example, Stuart Russell, a professor at the University of California, Berkeley, and author of the most popular and widely respected textbook in AI, has strongly warned of the existential risk from AGI. He has gone so far as to set up the Center for Human-Compatible AI, to work on the alignment problem.104 In industry, Shane Legg (Chief Scientist at DeepMind) has warned of the existential dangers and helped to develop the field of alignment research.105 Indeed many other leading figures from the early days of AI to the present have made similar statements.106

There is actually less disagreement here than first appears. The main points of those who downplay the risks are that (1) we likely have decades left before AI matches or exceeds human abilities, and (2) attempting to immediately regulate research in AI would be a great mistake. Yet neither of these points is actually contested by those who counsel caution: they agree that the time frame to AGI is decades, not years, and typically suggest research on alignment, not regulation. So the substantive disagreement is not really over whether AGI is possible or whether it plausibly could be threat to humanity. It is over whether a potential existential threat that looks to be decades away should be of concern to us now. It seems to me that it should.

One of the underlying drivers of the apparent disagreement is a difference in viewpoint on what it means to be appropriately conservative. This is well illustrated by a much earlier case of speculative risk, when Leo Szilard and Enrico Fermi first talked about the possibility of an atomic bomb: “Fermi thought that the conservative thing was to play down the possibility that this may happen, and I thought the conservative thing was to assume that it would happen and take all the necessary precautions.”107 In 2015 I saw this same dynamic at the seminal Puerto Rico conference on the future of AI. Everyone acknowledged that the uncertainty and disagreement about timelines to AGI required us to use “conservative assumptions” about progress—but half used the term to allow for unfortunately slow scientific progress and half used it to allow for unfortunately quick onset of the risk. I believe much of the existing tension on whether to take risks from AGI seriously comes down to these disagreements about what it means to make responsible, conservative, guesses about future progress in AI.

That conference in Puerto Rico was a watershed moment for concern about existential risk from AI. Substantial agreement was reached and many participants signed an open letter about the need to begin working in earnest to make AI both robust and beneficial.108 Two years later an expanded conference reconvened at Asilomar, a location chosen to echo the famous genetics conference of 1975, where biologists came together to pre- emptively agree principles to govern the coming possibilities of genetic engineering. At Asilomar in 2017, the AI researchers agreed on a set of Asilomar AI Principles, to guide responsible longterm development of the field. These included principles specifically aimed at existential risk:

Capability Caution: There being no consensus, we should avoid strong assumptions regarding upper limits on future AI capabilities.

Importance: Advanced AI could represent a profound change in the history of life on Earth, and should be planned for and managed with commensurate care and resources.

Risks: Risks posed by AI systems, especially catastrophic or existential risks, must be subject to planning and mitigation efforts commensurate with their expected impact.109

Perhaps the best window into what those working on AI really believe comes from the 2016 survey of leading AI researchers. As well as asking if and when AGI might be developed, it asked about the risks: 70 percent of the researchers agreed with Stuart Russell’s broad argument about why advanced AI might pose a risk;110 48 percent thought society should prioritize AI safety research more (only 12 percent thought less). And half the respondents estimated that the probability of the longterm impact of AGI being “extremely bad (e.g., human extinction)” was at least 5 percent.111 I find this last point particularly remarkable—in how many other fields would the typical leading researcher think there is a one in twenty chance the field’s ultimate goal would be extremely bad for humanity?

Of course this doesn’t prove that the risks are real. But it shows that many AI researchers take seriously the possibilities that AGI will be developed within 50 years and that it could be an existential catastrophe. There is a lot of uncertainty and disagreement, but it is not at all a fringe position.

There is one interesting argument for skepticism about AI risk that gets stronger—not weaker—when more researchers acknowledge the risks. If researchers can see that building AI would be extremely dangerous, then why on earth would they go ahead with it? They are not simply going to build something that they know will destroy them.112

If we were all truly **wise**, altruistic and **coordinated**, then this argument would indeed work. But in the **real world** people tend to develop technologies **as soon as the opportunity presents itself** and deal with the consequences later. One reason for this comes from the variation in our beliefs: if even a small proportion of researchers don’t believe in the dangers (or welcome a world with machines in control), they will be the ones who take the final steps. This is an instance of the unilateralist’s curse (discussed here). Another reason involves incentives: even if some researchers thought the risk was as high as 10 percent, they may still want to take it if they thought they would reap most of the benefits. This may be rational in terms of their self-interest, yet terrible for the world.

In some cases like this, **government** can **step in** to **resolve** these coordination and incentive problems in the public interest. But here these exact same coordination and incentive problems arise between states and there are no easy mechanisms for resolving those. If one state were to take it slowly and safely, they may fear others would try to seize the prize. Treaties are made exceptionally difficult because verification that the others are complying is even more difficult here than for bioweapons.113

Whether we **survive** the development of **AI** with our **longterm potential intact** may **depend** on whether we can **learn** to align and **control AI** systems faster than we can develop systems capable enough to pose a threat. Thankfully, researchers are **already** working on a **variety** of the key issues, including making AI more **secure**, more **robust** and more **interpretable**. But there are still very few people working on the core issue of aligning AI with human values. This is a young field that is going to need to progress a very long way if we are to achieve our security.

Even though our current and foreseeable systems pose no threat to humanity at large, time is of the essence. In part this is because progress may come very suddenly: through unpredictable research breakthroughs, or by rapid scaling-up of the first intelligent systems (for example by rolling them out to thousands of times as much hardware, or allowing them to improve their own intelligence).114 And in part it is because such a momentous change in human affairs may require more than a couple of decades to adequately prepare for. In the words of Demis Hassabis, co- founder of DeepMind:

We need to use the downtime, when things are calm, to prepare for when things get serious in the decades to come. The time we have now is valuable, and we need to make use of it.115

DYSTOPIAN SCENARIOS

So far we have focused on two kinds of existential catastrophe: extinction and the unrecoverable collapse of civilization. But these are not the only possibilities. Recall that an existential catastrophe is the permanent destruction of humanity’s longterm potential, and that this is interpreted broadly, including outcomes where a small fragment of potential may remain.

Losing our potential means getting locked into a bad set of futures. We can categorize existential catastrophes by looking at which aspects of our future get locked in. This could be a world without humans (extinction) or a world without civilization (unrecoverable collapse). But it could also take the form of an unrecoverable dystopia—a world with civilization intact, but locked into a terrible form, with little or no value.116

This has not happened yet, but the past provides little comfort. For these kinds of catastrophes only became possible with the advent of civilization, so our track record is much shorter. And there is reason to think that the risks may increase over time as the world becomes more interconnected and experiments with new technologies and ideologies.

I won’t attempt to address these dystopian scenarios with the same level of scientific detail as the risks we’ve explored so far, for the scenarios are diverse and our present understanding of them very limited. Instead, my aim is just to take some early steps toward noticing and understanding these very different kinds of failure.

We can divide the unrecoverable dystopias we might face into three types, on the basis of whether they are desired by the people who live in them. There are possibilities where the people don’t want that world, yet the structure of society makes it almost impossible for them to coordinate to change it. There are possibilities where the people do want that world, yet they are misguided and the world falls far short of what they could have achieved. And in between there are possibilities where only a small group wants that world but enforces it against the wishes of the rest. Each of these types has different hurdles it would need to overcome in order to become truly locked in.

[FIGURE 5.2 OMITTED]

Note that to count as existential catastrophes, these outcomes don’t need to be impossible to break out of, nor to last millions of years. Instead, the defining feature is that entering that regime was a crucial negative turning point in the history of human potential, locking off almost all our potential for a worthy future. One way to look at this is that when they end (as they eventually must), we are much more likely than we were before to fall down to extinction or collapse than to rise up to fulfill our potential. For example, a dystopian society that lasted all the way until humanity was destroyed by external forces would be an existential catastrophe. However, if a dystopian outcome does not have this property, if it leaves open all our chances for success once it ends—it is a dark age in our story, but not a true existential catastrophe.

The most familiar type is the enforced dystopia. The rise of expansionist totalitarianism in the mid-twentieth century caused intellectuals such as George Orwell to raise the possibility of a totalitarian state achieving global dominance and absolute control, locking the world into a miserable condition.117 The regimes of Hitler and Stalin serve as a proof of principle, each scaling up to become imperial superpowers while maintaining extreme control over their citizens.118 However, it is unclear whether Hitler or Stalin had the expansionist aims to control the entire world, or the technical and social means to create truly lasting regimes.119

This may change. Technological progress has offered many new tools that could be used to detect and undermine dissent, and there is every reason to believe that this will continue over the next century. Advances in AI seem especially relevant, allowing automated, detailed monitoring of everything that happens in public places—both physical and online. Such advances may make it possible to have regimes that are far more stable than those of old.

That said, technology is also providing new tools for rebellion against authority, such as the internet and encrypted messages. Perhaps the forces will remain in balance, or shift in favor of freedom, but there is a credible chance that they will shift toward greater control over the populace, making enforced dystopias a realistic possibility.

A second kind of unrecoverable dystopia is a stable civilization that is desired by few (if any) people. It is easy to see how such an outcome could be dystopian, but not immediately obvious how we could arrive at it, or lock it in, if most (or all) people do not want it.120

The answer lies in the various population-level forces that can shape global outcomes. Well-known examples include market forces creating a race to the bottom, Malthusian population dynamics pushing down the average quality of life, or evolution optimizing us toward the spreading of our genes, regardless of the effects on what we value. These are all dynamics that push humanity toward a new equilibrium, where these forces are finally in balance. But there is no guarantee this equilibrium will be good.

For example, consider the tension between what is best for each and what is best for all. This is studied in the field of game theory through “games” like the prisoner’s dilemma and the tragedy of the commons, where each individual’s incentives push them toward producing a collectively terrible outcome. The Nash equilibrium (the outcome we reach if we follow individual incentives) may be much worse for everyone than some other outcome we could have achieved if we had overcome these local incentives.

The most famous example is environmental degradation, such as pollution. Because most of the costs of pollution aren’t borne by the person who causes it, we can end up in a situation where it is in the self-interest of each person to keep engaging in such activities, despite this making us all worse off. It took significant moral progress and significant political action to help us break out of this. We may end up in new traps that are even harder to coordinate our way out of. This could be at the level of individuals, or at the level of groups. We could have nations, ideological blocs, or even planets or descendent species of Homo sapiens locked in harmful competition—doing what is best for their group, but bad for groups on the whole.

I don’t know how likely it is that we suffer a sufficiently bad (and sufficiently intractable) tragedy of the commons like this. Or that we are degraded by evolutionary pressures, or driven to lives of very low quality by Malthusian population dynamics, or any other such situation. I’d like to hope that we could always see such things coming and coordinate to a solution. But it’s hard to be sure that we could.

The third possibility is the “desired dystopia.”121 Here it is easier to see how universal desire for an outcome might cause us to lock it in, though less clear how such an outcome could be dystopian. The problem is that there are many compelling ideas that can radically shape our future— especially ideologies and moral theories, as these make direct normative claims about the world we should strive to create. If combined with the technological or social means for instilling the same views in the next generation (indoctrination, surveillance), this has the potential to be disastrous.

The historical record is rife with examples of seriously defective ideologies and moral views that gripped large parts of the world. Moreover, even reasonable normative views often recommend that they be locked in— for otherwise a tempting rival view may take over, with (allegedly) disastrous results.122 Even though the most plausible moral views have a lot of agreement about which small changes to the world are good and which are bad, they tend to come strongly apart in their recommendations about what an optimal world would look like. This problem thus echoes that of AI alignment, where a strong push toward a mostly correct ideal could instead spell disaster.

Some plausible examples include: worlds that completely renounce further technological progress (which ensures our destruction at the hands of natural risks),123 worlds that forever fail to recognize some key form of harm or injustice (and thus perpetuate it blindly), worlds that lock in a single fundamentalist religion, and worlds where we deliberately replace ourselves with something that we didn’t realize was much less valuable (such as machines incapable of feeling).124

All of these unrecoverable dystopias can be understood in terms of lock-in. Key aspects of the future of the civilization are being locked in such that they are almost impossible to change. If we are locked into a sufficiently bad set of futures, we have an unrecoverable dystopia; an existential catastrophe.

Of course, we can also see lock-in on smaller scales. The Corwin Amendment to the US constitution provides a disturbing example of attempted lock-in. In an effort to placate the South and avoid civil war, the proposed Thirteenth Amendment aimed to lock in the institution of slavery by making it impossible for any future amendments to the constitution to ever abolish it.125

I cannot see how the world could be locked into a dystopian state in the near future.126 But as technology advances and the world becomes more and more interlinked, the probability of a locked-in dystopia would appear to rise, perhaps to appreciable levels within the next hundred years. Moreover, in the further future I think these kinds of outcomes may come to take up a high share of the remaining risk. For one thing, they are more subtle, so even if we got our act together and made preserving our longterm potential a high global priority, it may take remarkable wisdom and prudence to avoid some of these traps. And for another, our eventual spread beyond the Earth may make us nearly immune to natural catastrophes, but ideas travel at the speed of light and could still corrupt all that we hope to achieve.

A key problem is that the truth of an idea is only one contributor to its memetic potential—its ability to spread and to stick. But the more that rigorous and rational debate is encouraged, the more truth contributes to memetic success. So encouraging a culture of such debate may be one way we can now help avoid this fate. (For more on this, see the discussion of the Long Reflection in Chapter 7.)

The idea of lock-in also gives us another useful lens through which to think about existential risk in general. We might adopt the guiding principle of minimizing lock-in. Or to avoid the double negative, of preserving our options.127 This is closely related to the idea of preserving our longterm potential—the difference being that preserving our options takes no account of whether the options are good or bad. This is not because we intrinsically care about keeping options alive even if they are bad, but because we aren’t certain they are bad, so we risk making an irreversible catastrophic mistake if we forever foreclose an option that would turn out to be best.

OTHER RISKS

What other future risks are there that warrant our concern?

One of the most transformative technologies that might be developed this century is nanotechnology. We have already seen the advent of nanomaterials (such as carbon nanotubes) which are just a few atoms thick and structured with atomic precision. But much larger vistas would open up if we could develop machinery that operates with atomic precision. We have proof that some form of this is possible within our very own cells, where atomically precise machinery already performs their essential functions.

In the popular imagination nanotechnology is synonymous with building microscopic machines. But the bigger revolution may instead come from using **nanomachinery** to create **macro-scale** **objects**. In his foundational work on the topic, Eric Drexler describes how nanotechnology could allow desktop fabricators, capable of assembling anything from a diamond necklace to a new laptop. This atomically precise manufacturing would be the ultimate form of 3D printing: taking a digital blueprint for the object and the raw chemical elements, and producing an atomically precise instance. This may allow us to construct things beyond our current technological reach, as well as cutting prices of existing objects such as computers or solar cells to near the cost of their raw materials, granting the world vastly more computing power and clean energy.

Such a powerful technology may pose some **existential risk**. Most attention has so far focused on the possibility of creating tiny self- replicating machines that could **spread** to create an **ecological** catastrophe. This may be possible, but there are mundane dangers that appear more likely, since extreme manufacturing power and precision would probably also allow the production of **new w**eapons of **m**ass **d**estruction.128 Indeed the problems resemble those of advanced **biotech**nology: the democratization of extremely powerful technology would allow individuals or small groups access to the kinds of power (both **constructive** and **destructive**) that was previously only available to powerful **nations**. **Solutions** to managing this technology may require **digital controls** on what can be fabricated or state control of fabrication (the path we took with nuclear power). While this technology is more speculative than advanced biotechnology or AI, it may also come to pose a significant risk.

A very different kind of risk may come from our explorations beyond the Earth. Space agencies are planning missions which would return soil samples from Mars to the Earth, with the chief aim of looking for signs of life. This raises the possibility of “back contamination” in which microbes from Mars might compromise the Earth’s biosphere. While there is a consensus that the risk is extremely small, it is taken very seriously.129 The plan is to return such samples to a new kind of BSL-4 facility, with safeguards to keep the chance of any unsterilized particle escaping into the environment below one in a million.130 While there are still many unknown factors, this anthropogenic risk appears comparatively small and well managed.131

The extra-terrestrial risk that looms largest in popular culture is conflict with a spacefaring alien civilization. While it is very difficult to definitively rule this out, it is widely regarded to be extremely unlikely (though becoming more plausible over the extreme long term).132 The main risk in popular depictions is from aliens traveling to Earth, though this is probably the least likely possibility and the one we could do the least about. But perhaps more public discussion should be had before we engage in active SETI (sending powerful signals to attract the attention of distant aliens). And even passive SETI (listening for their messages) could hold dangers, as the message could be designed to entrap us.133 These dangers are small, but poorly understood and not yet well managed.

Another kind of anthropogenic risk comes from our most radical scientific **experiments**—those which create **truly unprecedented** conditions.134 For example, the first nuclear explosion created temperatures that had never before occurred on Earth, opening up the theoretical possibility that it might ignite the atmosphere. Because these conditions were unprecedented we lost the reassuring argument that this kind of event has happened many times before without catastrophe. (We could view several of the risks we have already discussed—such as back contamination, gain of function research and AGI—through this lens of science experiments creating unprecedented conditions.)

In some cases, scientists confidently assert that it is impossible for the experiment to cause a disaster or extinction. But even **core** scientific certainties have been **wrong before**: for example, that objects have determinate locations, that space obeys Euclid’s axioms, and that atoms can’t be subdivided, created or destroyed. If pressed, the scientists would clarify that they really mean it couldn’t happen without a major change to our scientific theories. This is sufficient certainty from the usual perspective of seeking accurate knowledge, where 99.9 percent certainty is more than enough. But that is a standard which is independent of the stakes. Here the stakes are uniquely high and we need a standard that is sensitive to this.135

The usual approach would be to compare the expected gains to the expected losses. But that is challenging to apply, as a very low (and hard to quantify) chance of enormous catastrophe needs to be weighed against the tangible benefits that such experiments have brought and are likely to bring again. Furthermore, the knowledge or the technologies enabled by the experiments may help lower future existential risk, or may be necessary for fulfilling our potential.

For any given experiment that creates truly unprecedented conditions, the chance of catastrophe will generally be very small. But there may be exceptions, and the aggregate chance may build up. These risks are generally not well governed.136

These risks posed by **future tech**nologies are **by their** very **nature** more **speculative** than those from natural hazards or the most powerful technologies of the present day. And this is especially true as we moved from things that are just now becoming possible within biotechnology to those that are decades away, at best. But one doesn’t have to find **all** of these threats to be **likely** (or **even plausible**) to recognize that there are **serious risks ahead**. Even if we **restrict our attention** to engineered pandemics, I think there is more existential risk than in all risks of the last two chapters combined, and those risks were **already sufficient** to make safeguarding humanity a **central priority** of our time.

UNFORESEEN RISKS

Imagine if the scientific establishment of **1930** had been asked to compile a list of the existential risks humanity would face over the following hundred years. They would have **missed most** of the risks covered in this book—especially the anthropogenic risks.137 Some would have been on the edge of their awareness, while others would come as complete shocks. How much risk lies beyond the limits of our **own** vision?

We can get some inkling by considering that there has been no **slow-down** in the rate at which we’ve been **discovering** risks, **nor** the rate at which we’ve been **producing** them. It is thus likely we will face **unforeseen risks** over the next hundred years and beyond. Since humanity’s power is still rapidly growing, we shouldn’t be surprised if some of these novel threats pose a substantial amount of risk.

One might wonder what good can come of considering risks so far beyond our sight. While we cannot directly work on them, they may still be lowered through our broader efforts to create a world that takes its future seriously. Unforeseen risks are thus important to understanding the relative value of **broad** versus **narrowly targeted efforts**. And they are important for estimating the **total risk** we face.

Nick Bostrom has recently pointed to an important class of unforeseen risk.138 Every year as we invent new technologies, we may have a chance of stumbling across something that offers the destructive power of the atomic bomb or a deadly pandemic, but which turns out to be easy to produce from everyday materials. Discovering **even one** such technology might be enough to make the **continued existence** of human civilization **impossible**.

**2AC – O/W’s nukes**

**Outweighs nuke war:**

**1. Unlike AI, nuke war’s not existential**

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The idea that AI might one day threaten humanity has been around for some time. In 1863, the novelist Samuel Butler (1863 ,185) suggested that machines may one day hold “supremacy over the world and its inhabitants”. By the mid-twentieth century, these concerns had left the realm of science fiction, as thinkers like Alan Turing (1951, 260) began to warn the public that we should expect intelligent machines to eventually “take control”. Still, for many years, academics did not spill much ink over these concerns, even while Hollywood filmmakers ran with them, producing countless blockbusters based on this “AI takeover” scenario (think: The Terminator or Battlestar Galactica). Over the last decade or so, however, many leading academics and entrepreneurs have notably increased their attention to existential risks from AI. These concerns are, as we will see, more subtle than those depicted in crude Hollywood-produced AI takeover scenarios. Indeed, those depictions have largely misrepresented the concrete issues scholars are concerned with by overly focusing on anthropomorphic concerns of conscious AI systems deciding to destroy humans.

This renewed scholarly interest in AI safety has been spurred on in part by the recent **deep learning** revolution. This period is defined by major **advances** in the accomplishments of deep **neural networks**— artificial neural networks with **multiple layers** between the input and output layers—across a **wide range of areas**, including game-playing, speech and facial recognition, and image generation. Even with these breakthroughs though, the cognitive capabilities of current AI systems remain limited to **domain-specific** applications. Nevertheless, many researchers are **alarmed** by the **speed of progress** in AI and worry that **future** systems, if not **managed** correctly, could present an **existential threat**.

Despite the renewed interest in this concern, there remains substantial disagreement over both the nature and the likelihood of the existential threats posed by AI. Hence, our aim in this chapter is to explicate the main arguments that have been given for thinking that AI does pose an existential risk, and to point out where there are disagreements and weakness in these arguments. The chapter has the following structure: in §2, we will introduce the concept of existential risk, the sources of such risks, and how these risks are typically assessed. In §3–5, we will critically examine three commonly cited reasons for thinking that AI poses an existential threat to humanity: the control problem, global disruption from an AI “arms race”, and the weaponization of AI. Our focus is on the first of these three, because it represents a kind of existential risk that is novel to AI as technology. While the latter two are equally important, they have commonalities with other kinds of technologies (e.g., nuclear weapons) discussed in the literature on existential risk, and so we will dedicate less time to them.

2. What Is an Existential Risk?

Many people believe that existential risks (henceforth, Xrisks) are the greatest threats facing humanity. And whilst there is much common ground amongst scholars about which scenarios constitute an Xrisk—the most commonly cited example is extinction risks1—there is not as much consensus on the precise definition of the concept (Beard et al., 2020; Torres, 2019). While most Xrisk scholars agree that a risk is existential if an adverse outcome would bring about human extinction, few endorse the narrower view that a risk is existential only if it would cause this outcome.2 Most definitions of Xrisk are broader, including at times the risk of global civilizational collapse (Rees, 2003; Ó hÉigeartaigh, 2017); scenarios in which the technological and moral potential of humanity is “permanently and drastically” curtailed (Bostrom, 2002, 2013); and suffering risks, defined as cases in which “an adverse outcome would bring about severe suffering on an astronomical scale, vastly exceeding all suffering that has existed on Earth so far” (Sotala & Gloor, 2017, 389).

Xrisks are typically distinguished from the broader category of global catastrophic risks. Bostrom (2013), for example, uses two dimensions—scope and severity—to make this distinction. Scope refers to the number of people at risk, while severity refers to how badly the population in question would be affected (ibid, 16). Xrisks are at the most extreme end of both of these spectrums: they are pan-generational in scope (i.e., “affecting humanity over all, or almost all, future generations”), and they are the severest kinds of threats, causing either “death or a permanent and drastic reduction of quality of life” (ibid, 17). Perhaps the clearest example of an Xrisk is an asteroid impact on the scale of that which hit the Earth 66 million years ago, wiping out the dinosaurs (Schulte et al., 2010; Ó hÉigeartaigh, 2017). Global catastrophic risks, by way of contrast, could be either just as severe but narrower in scope, or just as broad but less severe. Some examples include the destruction of cultural heritage, thinning of the ozone layer, or even a large-scale pandemic outbreak (Bostrom, 2013). In this chapter, we will focus mostly on the least controversial category of Xrisks— extinction risks—but will also at times discuss some of the other scenarios mentioned.

2.1 Sources of Xrisk

For most of human history, the only source of Xrisks facing humanity were natural causes, such as an asteroid hitting Earth or a global pandemic (Bostrom, 2002). But the creation of the first atomic bomb in 1945 introduced a new source of existential threat to humanity, one that was anthropogenic in nature. But since then, humanity has created numerous other kinds of threats to our own existence, including human- caused climate change, global biodiversity loss, biological warfare, and threats from artificial intelligence, for example. In fact, it is widely thought that most Xrisks today are anthropogenic and that, as a result of these new threats, this current century is the riskiest one that humanity has ever faced (Rees, 2003; Bostrom, 2013; Ó hÉigeartaigh, 2017; Ord, 2020).

Not all of these threats pose straightforward Xrisks. Let’s consider an extinction scenario to be the existential outcome in question, and then take **nuclear** fallout as an example. Today, the worldwide arsenal of nuclear weapons could lead to unprecedented death tolls and habitat destruction and, hence, it poses a clear global catastrophic risk. Still, experts assign a relatively **low probability** to **human extinction** from nuclear warfare (Martin, 1982; Sandberg & Bostrom, 2008; Shulman, 2012). This is in part because it seems more likely that extinction, if it follows at all, would occur indirectly from the effects of the war, rather than directly. This distinction has appeared in several discussions on Xrisks (e.g., Matheny, 2007, Liu et al., 2018; Zwetsloot & Dafoe, 2019), but it is made most explicitly in Cotton-Barratt et al. (2020, 6), who explain that a global catastrophe that causes human extinction can do so either directly by “killing everyone”, or indirectly, by “removing our ability to continue flourishing over a longer period.” A nuclear explosion itself is unlikely to kill everyone directly, but the resulting effects it has on the Earth could lead to lands becoming uninhabitable, in turn leading to a scarcity of essential resources, which could (over a number of years) lead to human extinction. Some of the simplest examples of direct risks of human extinction, by way of contrast, are “[i]f the entire planet is struck by a deadly gamma ray burst, or enough of a deadly toxin is dispersed through the atmosphere” (ibid, 6). What’s critical here is that for an Xrisk to be direct it has to be able to reach everyone.

**2. AI’s millions of times more powerful**

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According to Yampolskiy and Spellchecker (2016), the **probability** and **seriousness** of AI failures will **increase with time**. We estimate that they will reach their peak between the appearance of the first self-improving AI and the moment that an AI or group of AIs reach global power, and will later diminish, as late-stage AI halting seems to be a low-probability event.

AI is an **extremely powerful** and **completely unpredictable** technology, **millions of times more powerful than nuc**lear weapon**s**. Its existence could create **multiple individual global risks**, most of which we **can not currently imagine**. We present several dozen separate global risk scenarios connected with AI in this article, but it is likely that some of the most serious are not included. The **sheer number of possible failure modes** suggests that there are more to come.

**1AR – AT: US – China Relations High**

**China will not accept coop with US political obstacles ensure.**

**Sullivan** 10/4/20**21**

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AI Competition between the U.S. and China is not irredeemably zero-sum; in fact, collaboration and cooperation are not only necessary, but it is beneficial to both nations and carries the potential of helping all of humanity. In helping humanity address transnational issues, “power becomes a positive-sum game” as the U.S., according to Joseph Nye, approaches “power in terms of the ability to accomplish joint goals” where “empowering others can help us accomplish our own goals.”441 Competition does equate to conflict. Finding commonalities in this “inevitable and inescapable rivalry” allows our nations to accept our differences and search out commonalities or areas where values may align, much like companies such as Apple and Samsung.442 The idea of “rivalry partners” put forward by Graham Allison, or “coopetition” or “coevolution” by Elizabeth Economy, are alternative perspectives for the U.S.-China relationship, which with certain assumptions, retains competition as the centerpiece of the relationship while opening up opportunities for cooperation in areas that benefit all of humankind. The risk, however, is if cooperation becomes the objective, not the means, thus it “encourages the actor more committed to cooperation to excuse or even ignore the other’s missteps or malign actions out of fear that cooperation otherwise will not ultimately be realized.”443 A better approach to cooperation **focuses on allies and partners**, where values naturally align and working through the difficult challenges that AI presents may yield results more quickly. While China has a long history of pursuing bilateral agreements, especially on trade, they remain flexible in adapting to changing environments where their participation offers an opportunity for leadership roles or offsets U.S. interests in regional agreements. In the current geopolitical climate, **China is unlikely to accept bilateral agreements or arrangements with the U.S. on AI**, preferring multilateral engagements to further their platform for multipolarity and reserving bilateral agreements for economic trade or when opportunities appear to entice developing nations to the BRI or other China-led efforts. The U.S. should not avoid bilateral engagements with Beijing on critical security issues but prioritizing the needs of allies and recruiting nations with shared values presents a path to a more inclusive and diverse alliance. Such an arrangement should not exclude non-democratic countries such as Vietnam or Singapore, nor should it exclude China by design. The U.S. gains legitimacy through leadership that focuses not on division or conflict but by relying on clear values and norms to attract like-minded nations across geographical boundaries and political ideologies. Values more than any other element of competition impede cooperation with China and demonstrating to the world that the U.S. will stand up to China on human rights, while not closing the door on collaboration or cooperation on issues such as climate change, keeps the door open for China to participate, without giving them the power to block, delay or disrupt efforts.

**Even If they win relations are high the plan is necessary to maintain a workable floor – that’s key to collapse**

**Haenle & Bresnick 2/21**/2022

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By committing to this pragmatic approach, the United States and China may be able to find a way to put **a floor under deteriorating relations**, begin to build goodwill, and lay the foundation for taking on the larger structural issues in areas, like trade and technology, that will be key to determining the future health and welfare of the U.S.-China relationship over the long term. Despite the two nations’ differing mindsets and approaches to bilateral ties, starting small could prove the best method through which to, eventually, realize large gains.

**The plan would be a boost to US-China relations**

**Haenle & Bresnick 2/21**/2022

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Biden has opted to use a calmer, more restrained tone with Beijing than did his predecessor, with the aim of avoiding escalation. Moreover, unlike some Trump administration officials, Biden’s team has made it clear that Washington is not seeking regime change in China. And though Biden criticized Trump’s lack of a clear set of goals or a coherent interagency policy framework for addressing the China challenge, his administration has yet to release its long-awaited China strategy (though China does figure prominently in its recently issued Indo-Pacific Strategy). Until that document is issued, the finer points of the administration’s plans to compete with Beijing, as well as the end goal of such competition, will remain fuzzy. A clear articulation of U.S. aims would be helpful in Washington’s efforts to secure greater **international cooperation from allies and partners in addressing the challenges China poses**. It would also provide Chinese and U.S. leaders a starting point from which to negotiate the future of bilateral ties.

**2AC – Solvency**

**2AC – Solvency**

**Cyber dialogue creates technical standards and secures interoperability for quantum computing and AI**

**Mazzucchi &** **Desforges 19**

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INTRODUCTION

Over the past decades, cyberspace has transformed societies around the world, reshaping economies, politics, social affairs, and, increasingly, militaries. The first cyber attacks launched as part of a military conflict are now twenty years old.1 In the last decade, cyberspace has become a **central aspect** of military operations.

The acceleration of the military use of cyber capabilities and the simultaneous **militarization** of cyberspace create **new threats** and **opportunities** for **NATO**. The alliance must respond in a number of ways, including by increasing investment, strengthening technical cooperation with the European Union (EU), and seeking **political consensus** on the attribution of, and **responses to,** **cyber attacks**.

ISSUES AT STAKE

Armed forces and vital civilian organizations, such as operators of energy networks, rely more and more on computer systems for their operations. This increases both their efficacy and their vulnerability. NATO saw the significance of this trend some time ago, and since 2016, the allies have recognized cyberspace as a **domain** in itself. The alliance integrates cyber capabilities into its thinking and planning for operations, even if mainly in defensive terms. The alliance’s 2016 Cyber Defense Pledge helped member states strengthen their national cyber defense capabilities by working together.2

Twenty-four of NATO’s twenty-nine member states have issued **public cyber doctrines** that deal with military issues.3 Dedicated units are being created across NATO countries, either with a unified cyber command, as in France and the United States, or with a devoted cyber force, like in Germany. This is the right step overall, although allies’ **differing approaches** to cyber strategy and organization could **cause challenges** when it comes to **joint** and **combined** operations.

NATO is responsible for protecting its networks and infrastructure, as well as promoting cooperation among allies and with partner nations. For the moment, the alliance’s most important prerogatives and capabilities lie in the defensive use of cyber capabilities, although individual countries can volunteer various cyber services—not only defensive ones—to NATO commanders. In 2018, the alliance set up the Cyberspace Operations Center in its command structure to help nations and commanders better understand these possible national contributions and their uses. NATO also strengthened its cooperation on cyber matters with the EU through a joint declaration at the alliance’s 2016 summit in Warsaw.4

There is often little difference in offensive cyber capabilities between criminal groups and some military forces. Hacking tools are becoming more accessible. In 2017, the U.S. National Security Agency’s sophisticated offensive suite was stolen or leaked and subsequently used in attacks.5 In parallel, critical civilian infrastructure, such as the networks that govern energy or water distribution, is becoming more dependent on the internet, making it a target in potential conflicts. This infrastructure could even be used as a tool for a large attack: if corrupted by hackers, it could be turned into a botnet—a network of computers linked by malware. It has become possible, in theory, to achieve a strategic effect with cyber attacks on civilian facilities and infrastructure, which tend to be less protected than military equipment. As a result, the line between the defense of military and nonmilitary assets in cyberspace is becoming increasingly blurred.

One consequence of this trend is closer military cooperation with civilian authorities, including law enforcement. However, military organizations and armed forces tend to invest more than civilian ministries or agencies in cyber defense and cybersecurity. In the United States, for example, the Department of Defense accounted for more than 50 percent of the 2018 federal cybersecurity budget, representing $8.5 billion out of $15 billion.6 Unchecked, this trend creates a growing gap between military and civilian spending.

Several international organizations and, more recently, companies have decided to address stability in cyberspace and the regulation of cyber conflicts. Some states and nonstate actors are even suggesting the adoption of a treaty on the use of information technology and international security. After meetings of the United Nations (UN) Group of Governmental Experts failed in 2017 to reach a consensus on what constitutes states’ responsible behavior in cyberspace, the UN initiated two new negotiation processes. One is a resolution, sponsored by the United States and European countries, to create a new group of governmental experts.7 The other is a Russia- and China-sponsored resolution to set up an open-ended working group.8 The two tracks have different calendars and mandates, including on consultative meetings. The outcomes of their work, and the potential codes of conduct for cyber conflict they could generate, will provide guidance for how all countries, including NATO allies, should behave in the future regarding cyber operations

RECOMMENDATIONS

Research and development policies and investment strategies in cyber and military technologies are key elements to ensure that armed forces are equipped with up-to-date capabilities. The fast pace of technological evolution requires NATO member states to make significant, continuous investments to avoid falling behind in terms of capabilities.

Alongside investments in technology, allies need to strengthen education in cyber matters, not only in engineering, but also in strategic thinking and social use. All military personnel have to be involved to ensure greater cybersecurity awareness and a better integration of cyber capabilities into military operations. The most important challenge for NATO as an alliance is to **bridge the gap** between those states with **first-rate cyber capabilities** and awareness and those that **lag behind**. Currently, a handful of member states are **pulling away from the others** in terms of the mass **integration** of connected devices, **quantum computing**, and **A**rtificial **I**ntelligence–based systems. This **gap** could have a **major impact** on **burden sharing** in NATO, because a low level of spending by one or more countries would need to be compensated by the others to maintain a satisfactory global level for the alliance.

Allies should draw up national cyber rules of engagement for offensive operations in accordance with principles of international law. Certain policies espoused by some member states, such as hack-back, which allows private firms to pursue attackers into other companies’ networks, or cyber deterrence, could lead to uncontrolled escalation.9 International law tends to limit this escalation to mainly economic responses, such as sanctions and countermeasures. All NATO allies also need to ensure that their rules of engagement are **compatible** with the alliance’s agreed approach to cyber defense. At present, **different countries** have **different views** on offensive cyber policies, in particular.

The alliance should give technical assistance to member states that are willing to share information and national best practices. NATO should expand its rapid-response system to cover attacks that blur the line between the military and nonmilitary realms, such as an attack on critical nonmilitary networks in the context of a NATO military mission.

**Unity** is important when it comes to **external communications** by the allies, or by NATO’s secretary general, on attribution. While the decision to attribute an attack to a particular entity remains a sovereign and political one, allies should discuss any such communication from individual capitals before it is made. This would not only prevent uncontrolled escalation but also preserve the strength and unity of the alliance.

NATO should develop **standards** on the security of **emerging cyber technologies** in close partnership with the EU. Allies could address the **interoperability** and **security** of connected devices in the defense sector by devising a **common policy** in the alliance. NATO should also impose a minimum **standard of cybersecurity** in products, such as connected devices and systems; computer-based technologies; and command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) systems during the acquisition process.

Quantum computers deserve **particular attention** from NATO, because they can be **game changers** in the military domain. The alliance should act as a **gateway** between **member states’** militaries and **defense companies** to promote further **industrial cooperation**, notably on **technical standards**. Such cooperation should be based on the NATO Industry Cyber Partnership, which provides platforms for the exchange of information, threat trends, and best practices. The alliance must foster the **maximum possible level of cooperation** to ensure that NATO countries are the **first to implement this technology.**

**2AC – NATO is Key**

**NATO is key to shape AI norms**

* EDTs = Emerging and Disruptive Technologies

**Stanley-Lockman & Trabucco 3/22**

Zoe Stanley-Lockman & Lena Trabucco , “NATO’s Role in Responsible AI Governance in Military Affairs”, Zoe Stanley-Lockman Nanyang Technological University, Lena Trabucco University of Copenhagen, Center for Military Studies The Oxford Handbook of AI Governance Edited by Justin Bullock, Yu-Che Chen, Johannes Himmelreich, Valerie M. Hudson, Anton Korinek, Matthew Young , and Baobao Zhang Subject: Political Science, Political Institutions Online Publication Date: Mar 2022DOI: 10.1093/oxfordhb/9780197579329.013.69 – ECM

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 tech**nology **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.

**2AC – Coop w/ Allies key**

**Cooperating with allies is key to rebuff China – US only policies risk turning our allies off and decreases the possible to check China**

**Sullivan** 10/4/20**21**

Ryan Sullivan Army pilot studied at the prestigious Fudan University in Shanghai, China, as an Olmsted Scholar graduate-level work in the field of Artificial Intelligence to deliver an in-depth study of the critical elements of U.S.-China competition in Artificial Intelligence, “The U.S., China, and Artificial Intelligence Competition Factors”, <https://www.airuniversity.af.edu/Portals/10/CASI/documents/Research/Cyber/2021-10-04%20US%20China%20AI%20Competition%20Factors.pdf?ver=KBcxNomlMXM86FnIuuvNEw%3D%3D> – ECM

The U.S. should rely more on allies and international institutions, such as the UN, to deliver criticism and press the CCP on human rights issues. Such an approach requires not just shared values and desired end states but close coordination to synthesize and produce statements promptly. If the U.S. is always the loudest voice criticizing the regime and if every infraction meets with aggressive overtures, even our staunchest allies could grow weary and struggle to discern significant issues amongst the white noise. The delivery mechanism and the tone of delivery matter. **Trusting our allies**, those with shared values, to find their voice and offer broader criticism of China is another means of achieving the desired end of holding the regime accountable. The byproduct of such an approach is the perceived messaging to younger Chinese, as the “worldview they’re exposed to is one in which foreign criticism of the Chinese government is often reflexively thought to be backed by the U.S. government” and criticism of the CCP is viewed as anti-Chinese.

**Offcase**

**Kritiks**

**2AC – Our research is good**

**Our research is good – The 1AC’s focus on responsible ways to govern AI fuses STS research into military studies. This is *UNIQUELY* good because it spills over into NATO military planning.**

* STS studies = Science, technology, and society studies
* RRI = responsible research and innovation—Focused on responsible innovation
* Military focus on deterrence and defense – core to its mission
* A interdisciplinary approach would bridge the divide and promote desired goals at the expense of undesired goals
* That creates spillover effects to NATO overall

**Stanley-Lockman & Trabucco 3/22**

Zoe Stanley-Lockman & Lena Trabucco , “NATO’s Role in Responsible AI Governance in Military Affairs”, Zoe Stanley-Lockman Nanyang Technological University, Lena Trabucco University of Copenhagen, Center for Military Studies The Oxford Handbook of AI Governance Edited by Justin Bullock, Yu-Che Chen, Johannes Himmelreich, Valerie M. Hudson, Anton Korinek, Matthew Young , and Baobao Zhang Subject: Political Science, Political Institutions Online Publication Date: Mar 2022DOI: 10.1093/oxfordhb/9780197579329.013.69 – ECM

AI Governance and Military Affairs: Tensions in Existing Literature

Academic literature has long grappled with the intersection of **emerging technology and security** organizations.13 Two branches of literature that **tackle core questions** of technological trajectories and its relationship to human and social structures—a critical question of governance for military technology—**are STS studies and military innovation scholarship**. Although the theoretical approaches in STS and military innovation studies differ, they both share the important assumption that technology does not have its own innate logic, and instead measure technological change by its impact on social structures and interactions with humans. In other words, both fields treat technology **as an enabler in broader structures**. The term technology **is ubiquitous enough that it does not have a single definition**, but it is often defined in relation to human intention and purpose. Alex Roland describes technology as a “**purposeful human manipulation of the material world**” to “**serve some human purpose**.”14 If extending this basic idea of technology to technological innovation, then both STS studies and military-innovation scholarship lend relevant criteria.

Both academic fields are also relevant because, in the policy space, AI governance stakeholders are pursuing responsible research and innovation (**RRI**), which comes from STS studies, and defense stakeholders are similarly focused on responsible innovation and responsible use. More traditionally, the direct study of **military adoption of tech**nology is considered in the separate scholarship of military innovation, which includes a school of thought that focus on cultural and organizational factors. Between these two fields, **an interdisciplinary approach is helpful here to carry STS approaches to AI governance**, including RRI, **over to the space of military innovation**.

However, this is complicated by the reality that military organizations that see technological superiority **as a core element of deterrence and defense**, including NATO, engage in forms of technological determinism that STS scholars squarely reject. Respective views on technological determinism—which considers that technology shapes society as a largely autonomous process with limited human agency—thus creates a tension for governance prospects.15 To spotlight the aspects of military innovation related to governance, this section briefly expands on the overlaps and tensions between STS and military innovation literature.

Science, technology, and society (STS) studies

STS studies is helpful to understand how technologies such as AI develop relative to the human, social, and political structures that shape it, rather than as an independent entity to which humans have to adapt.16 In this vein, AI is not just a computational process involving software, hardware, and data,17 so much it is a socio-technical system that encompasses “human, social, and organizational factors.”18 Together, these factors enable a focus on the trajectory of technological development relative to social structures and power dynamics. STS scholars have also **helped develop RRI frameworks** that seek to guide technological development in **anticipatory, participatory, and adaptive frameworks to achieve desirable outcomes and prevent undesirable ones**.19 RRI is a structured approach to innovation in which stakeholders identify and act on their “collective commitment of care for the future through responsive stewardship of science and innovation in the present.”20 **It drives civilian AI ecosystems for NATO Allies that will also indirectly affect NATO**.21

**2AC – Perm Solvency**

**Perm solves – military planners will dominate SQ research absent the aff. This turns all their link arguments. The perm research a necessary blueprint not to reconcile but to harness the best of both worlds to develop effective governance strategies which NATO is uniquely receptive too.**

* Norms for AI remain immature
* RRI drives stakeholders to act responsibility
* Military stakeholders shape military research based on military advantages
* The refusal to engage BOTH risk alternative failure – the 1AC research method provides a necessary blueprint not to reconcile but to harness the best of both worlds to develop effective governance strategies.. this is uniquely good because NATO is receptive to these types of tactics
* corrigibility = capable of being corrected, reformed, or improved.

**Stanley-Lockman & Trabucco 3/22**

Zoe Stanley-Lockman & Lena Trabucco , “NATO’s Role in Responsible AI Governance in Military Affairs”, Zoe Stanley-Lockman Nanyang Technological University, Lena Trabucco University of Copenhagen, Center for Military Studies The Oxford Handbook of AI Governance Edited by Justin Bullock, Yu-Che Chen, Johannes Himmelreich, Valerie M. Hudson, Anton Korinek, Matthew Young , and Baobao Zhang Subject: Political Science, Political Institutions Online Publication Date: Mar 2022DOI: 10.1093/oxfordhb/9780197579329.013.69 – ECM

Responsible stewardship, or governance, of science and technology (S&T) requires stakeholders to change their approaches to technological development as the circumstances themselves change.22 In his book The Social Control of Technology, David Collingridge identified the double bind that makes technology governance (what he then referred to as social control) difficult: exerting social control or governing nascent technology is easy, but impossible because its evolution and eventual impacts are unknowable, and by the time the technology matures and its impact is realized, entrenched decisions will make future control more difficult.23 For now, AI remains a relatively immature technology, **meaning circumstances** will **change as knowledge emerges and norms** progressively **develop**. Collingridge also suggested the necessity of “corrigibility of innovation,” which refers to the “capacity to change shape or direction in response to stakeholder and public values and changing circumstances.”24 When applied to current **RRI** frameworks, the concept of corrigibility obligates governance stakeholders to shape the trajectory of a technology’s development and impact **in ways based on social structures**, both in anticipation of change and in response to decisions made in error.25 In short, stakeholders have to adopt corrigible practices to responsibly govern technology as it develops, and thus must claim their agency in guiding innovation even as technological development appears increasingly entrenched in previously made decisions and their subsequent outcomes.

This is important for AI governance because technological **advancement is making AI-accelerated risks clearer, including in the military space**. Risks—especially as related to AI-enabled autonomous systems, poisoning of information environments, **cyberattacks, unpredictable failure modes, and emergent behavior**—will evolve in form and scale as the technology matures and diffuses. If AI evolution means more entrenchment and less corrigibility, the STS foundations remind governance stakeholders how to course-correct and adapt to changing risk assessments and the overall impact of AI in the international system.26

Nevertheless, while STS scholars study how decision-making that shapes the trajectory of technological innovation becomes entrenched, the field largely rejects the premise of technological determinism. Maintaining the centrality of human agency, as exerted also through social structures and institutions, is antithetical to determinist perspectives on technology developing on its own path independent of intervention. As Allan Dafoe, another contributor to this Handbook, has argued, the STS academic community’s refusal to engage with technological determinism severely limits STS applicability to empirics.27 As discussed below, this has implications for the ability of the STS field to impart responsibility to governance stakeholders in an area such as **AI and international security**.

Military innovation literature

The scholars that examine the way that military stakeholders manage technology and shape its development trajectory **predominantly write on military innovation**.28 These scholars measure technology adoption in changes to doctrine, organizational structures, and operational concepts, rather than seeing the technology as an end in and of itself.29 From this perspective, technology subsequently shapes human and social structures and organizations. To take an example similar to Roland’s definition of technology, Jonathan Shimshoni’s concept of “military entrepreneurship” involves the active manipulation of technology, doctrine, and war plans.30 In this sense, new technology adoption has tangible and observable effects on the operational environment. Similarly, Thomas Mahnken illustrates that **military services shape tech**nology **to their respective purposes, rather than the other way around**.31 The purpose that this manipulation, or molding, of technology serves is the creation, and ideally sustainment, of a comparative military advantage.32

Still, the way that this military advantage is defined is relevant here because metrics of success differ from other scholarship dealing with innovation. Military innovation importantly constitutes the relationship and social structures that form between technology and military bureaucracies. Yet as a field, it does not necessarily extend these relationships to their status as stakeholders in wider technology governance regimes.33 For instance, in his review of the different schools of military innovation, Adam Grissom offers a consensus definition of military innovation that inherently links it to effectiveness in the battlespace.34 Grissom clarifies that “measures that are administrative or bureaucratic in nature, such as acquisition reform, are not considered legitimate innovation unless a clear link can be drawn to operational praxis.”35 This reinforces the idea that technology on its own does not constitute an innovation if it is not observable in military operational practice or in battlefield advantage.

The relatively narrow operational focus of military innovation scholarship means that management structures miss out on some of the uses of military power implicit in the governance of military technology. This means that both the bureaucratic entrenchment of technological advancement and the literature focusing on it do not necessarily address governance as an instrument of power in the military context. This may make sense for purely military technologies, but whether it discounts the agency that military bureaucracies have in governance of a pervasive, general-purpose technology like AI is worth separate consideration. As such, the operational measurement of the adoption and diffusion of technology as an instrument of military power likewise limits an understanding of how military technology management structures relate to governance.

Implications for military AI governance

Overall, STS offers much of the necessary groundwork for governance mechanisms and the impact of social structures on technology governance; **however**, it refuses to engage with technological determinism, or the independent influence of technology, that is often **a driving force in military innovation**. Recognizing that a comprehensive governance regime also needs to transpose to stakeholders that are engaged in the practices of governing AI, **this study on NATO sees military innovation scholarship as a helpful complement to apply these STS foundations to practitioners’ perspectives**. But scholarship on military innovation also has its own flaws, in that it looks at the management of technology exclusively formulated to exploit a comparative operational advantage. Measuring military innovation in relation to operational praxis makes sense to detect how military adoption of technology impacts operational excellence and upstream impacts on military strategy, but also makes it challenging for the empirics to apply to non-operational ways that military organizations exert their influence. Non-operational influence includes governance, the core topic that this chapter addresses.

Despite differences, borrowing from the layered **frameworks in STS and military innovation studies still helps contextualize innovation trajectories**. Indeed, select scholars have attempted to bridge the gap between the social constructivist angle in STS studies and the technologically “optimistic”36 assumptions that frame technologically deterministic undercurrents, as seen in case studies on military innovation.37 Thomas Hughes examined these undercurrents in the defense sector as part of his theory of “technological momentum,”38 which argued military organizations are subject to inaction in S&T decision-making because the entrenchment of previous investments and decisions constrain the course of future technological development. Steven Fino expands on Hughes with the idea that “technological dislocations,” are an alternative reconciliation mechanism that acknowledges that technological determinism may operate beneath the surface of a technology’s maturation trajectory, while still allowing for socially driven perturbations that “dislocate” the “otherwise logical evolutionary patterns” of that technology.39

Dafoe similarly attempts to widen the scope of technological determinism by placing it as an endpoint on a spectrum, with social constructivism on the other end. The purpose of this spectrum is to create the space for engagement with disciplines that heavily emphasize power dynamics, including military affairs and business in what he terms “military-economic adaptationism.”40 Unfortunately, both Fino and Dafoe concede that attributing agency and causality to technological developments are best “conducted after the fact”41 or “on longer timescales,” respectively.42 AI governance cannot benefit from such hindsight, as it is fundamentally a question of how to project and adapt to forces of ongoing change. For governance, this inertia places military organizations at odds with the responsiveness required to guide responsible technology governance frameworks. **Our aim is not to reconcile** these differences in this chapter, but rather to highlight how they frame one current governance challenge for military stakeholders such as NATO: how can they engage with the socio-technical foundations in RRI frameworks to shape, adapt to, and respond to technology-accelerated changes, **while simultaneously** pursuing their traditional aims of **adopting tech**nology **to deter and defend**?

On this note, it is worth mentioning that **NATO** itself has historically convened scholars from both STS and military innovation backgrounds to understand socio-technical changes to their operating environment.43 The Alliance also takes socio-technical factors into account in its S&T work on emerging technologies—including human–systems integration, technology monitoring, and forecasting work.44 This interest in socio-technical systems relating to effectiveness suggests scope for the Alliance to leverage technology governance as an instrument of its influence, as picked up in the next section.

**Case Neg – Mean Green Debate**

**Case – Cyber**

**1NC vs Cyber ADV**

**New Russian attacks wont reach the threshold of article V**

**The Hill 6/14**/2022

“Finland, Sweden’s NATO moves prompt fears of Russian cyberattacks”, <https://thehill.com/policy/cybersecurity/3488518-finland-swedens-nato-moves-prompt-fears-of-russian-cyber-attacks/>

Finland and Sweden’s move to join NATO has raised concerns about potential cyber retaliation from Russia, which sees the expansion of the alliance as a direct threat.

While **it is too early to judge** how Russia might try to use its cyber capabilities against **Finland, Sweden or other NATO members**, including the U.S., experts said it will likely launch unsophisticated and small-scale cyberattacks as a form of protest against the expansion.

**Such attacks would not have the severity of cyber efforts** Moscow **launched against Ukraine** amid the Russian invasion of that country.

**No cyber war or retaliation**

**Rodet 18**

Jasmine, Master’s Degree in Cyber Security, Strategy, and Diplomacy from the University of New South Wales, Cyber Security Program Manager at Fortescue Metals Group, “The Threat of Cyber War is Exaggerated”, 11/11/2018, linkedin.com/pulse/threat-cyber-war-exaggerated-jasmine-rodet/

For the regular person on the street, the term ‘cyber war’ is more likely to bring to mind the 1983 movie “WarGames” and the doomsday articles that appear regularly in the media about the ‘cyber battlefield’ and an impending World War III. This essay argues that the threat of cyber war is **exaggerated** and although it can, by definition, be stated that we are already in a state of cyber war, the impact on states is **negligible** compared to conventional war domains.

The argument is presented in 3 steps. The first step is to define cyber war and cyber weapons, referencing scholars and experts in the area of conventional war and the cyber domain. The second step is to explore who has been exaggerating the threat of cyber war and what their motivations might be. The third is to explore the evidence and quantify the probability and impact that cyberwar has had on states to date.

‘Cyber war’ is a term often used interchangeably in media with cyber-crime, cyber-attacks, cyber-conflict and cyber-incidents, creating confusion amongst the public and scholars alike. Clausewitz (1989, 75), in his book, On War, defines war as ‘an act of force to compel the enemy to do our will’. Rid (2012, 7) on the other interprets Clausewitz use of ‘force’ as meaning ‘violent’ force. According to Rid, if an act is not potentially violent, it is not an act of war. However, Stone (2013, 107) describes ‘cyber war’ as a politically motivated act of force, not necessarily lethal and not necessarily attributable. The definition by Powers and Jablonski states more simply that cyber war is the utilisation of digital networks for geopolitical purposes (Nocetti 2016, 464). Neither of the latter two definitions requires violence to qualify as cyber war. Under these definitions, the Stuxnet cyber-incident in 2010 and the Estonia incident in 2007 would constitute an act of cyber war, and as such we could say that nations have been at cyber war in the past and are likely to continue to engage in cyber war in years to come.

For this essay, I will use Stones definition to argue that even though states may engage in cyber war, the concept of cyber war is exaggerated. It seems that cyber war is **deliberately exaggerated** in the media and by politicians for **financial** and **political** gains. There are countless examples in the media and in politics of the exaggeration of the threat of cyber war and the language used plays a big factor in creating a sense of fear in the community.

The Four Corners report, Hacked, is a classic example where the reporter, Andrew Fowler describes the current situation in Australia as ‘… a secret war where the body count is climbing every day’ (Fowler 2013). The documentary reveals nothing violent or lethal about cyber incidents. The documentary is actually about hackers working from locations overseas, having targeted key Federal Government departments and major corporations in Australia.

In another example, NATO may be interpreted as exaggerating the threat of Cyber War when they invited Charlie Millar to present at their Conference for Cyber Conflict at the NATO Cooperative Cyber Defence Centre of Excellence in 2017. Millar is an independent security evaluator, and his presentation was titled ‘Kim Jong-il and me: How to build a cyber army to attack the US’. He later presented similar content at Def Con 2018. His presentation described the steps he would take to mount a cyber war, including the types of people he would engage, how much he would pay them, what his strategy would be and how much it would cost in total.

Who stands to gain from the exaggeration and hype? Logically, one group would be those that gain financially from the sale of cyber protective services and software. According to Valerino, 57% of technical experts surveyed said that we are currently in a cyber arms race and 43% said that the worst-case scenarios are inevitable (Valeriano and Ryan 2015). Translate this into sales and Gartner projects worldwide security spending will reach $96 Billion in 2018, up 8 Percent from 2017 and to top $113 billion by 2020 (Gartner 2017).

Additionally, there may be **political motivations** to exaggerate the threat of cyber war. Cyberspace is not well understood by the general public and fear is natural. In the US’s cyber security debate, observers have noted there is a tendency for policymakers, military leaders, and media, among others, to use frightening ‘cyber-doom scenarios’ when making a case for action on cyber security (Dunn 2008, 2).

There is some evidence to suggest that more recently in the political arena; we may be maturing in our understanding of the real threat of cyber war. The Tallinn Manual, an academic, non-binding study on how international law applies to cyber conflicts and cyber warfare, was written at the invitation of the Tallinn-based NATO Cooperative Cyber Defence Centre of Excellence. It was first published in 2013 with the title ‘The Tallinn Manual on the International Law of Cyber War’. In 2017, it was re-released with the revised title ‘Tallinn Manual 2.0 on the International Law of Cyber Operations’. The change in title from ‘war’ to ‘operations’ signifies a more moderate use of language from NATO and is an acknowledgement that cyber incidents generally fall below the threshold at which International Law would declare them to be a formal act of war. Experience over the 4 short years from 2013 to 2017 has demonstrated that cyber incidents tend to have a low-level impact on the target state. As the book’s authors put it ‘the focus of the original Manual was on the most severe cyber operations, those that violate the prohibition of the use of force in international relations, entitle states to exercise the right of self-defence, and/or occur during armed conflict’ while the new version ‘adds a legal analysis of the more common cyber incidents that states encounter on a day-to-day basis and that fall below the thresholds of the use of force or armed conflict’ (Leetaru 2017).

To get a better sense if cyber war is exaggerated, we must also consider the probability of cyber war in the future. The probability of cyber war should be weighed up against the probability of conventional war. Where tensions are already high, for example, between North Korea and the US or Russia and Estonia, I would argue that cyber war is more likely than conventional war. This is due to factors including; cyber warfare is less costly than conventional warfare, states are less rational in their decision space in the cyber realm, states find cyber attribution very difficult to achieve so attacks can be undertaken covertly and cyber war is considered ‘a challenge’ and central to the hackers’ ethos (Junio 2013, 128). Further, Sanger describes in his book, The Perfect Weapon, cyber weapons (such as cyber vandalism, Distributed Denial of Service (DDOS), intrusions and advanced persistent threat (APT)) as the ‘perfect weapons’ for the following reasons;

They are cheap: When compared to Nuclear weapons, there are only a handful of nations globally that can afford the technology to create a nuclear weapon.

They are easily accessible: Unlike a Nuclear bomb that requires uranium, a highly protected metal, in the production process, a cyber weapon can be created with minimal investment and highly available IT infrastructure.

They can be dialled-up or dialled-down relatively easily. A ballistic missile, the force of the explosion cannot be adjusted as easily as a DDOS attack. A DDOS attack can be adjusted to last an hour, a few days or a few weeks.

They have a huge range in how they are used: Sabotage as with Stuxnet, Espionage as with the Chinese industrial spying on the US, North Korea’s infiltration of Sony, the Iranians attack on Las Vegas Sands Corp. casino operators.

The significant factor is that cyber weapons can and are being used every day for discrete, **low-level** cyber conflicts to undermine and disrupt rivals, but historically it has **not progressed** to open conflict, nor has it **warranted** a **military response** (Sanger 2018). Additionally, massive cyber operations would necessarily impact the civilian population and violate the immunity of non-combatants. The conditions of war dictate that this is **“taboo”** and to date, rival states have **shown restraint** in their use of cyber weapons for this reason (Valeriano and Ryan 2015). It appears that the threat that cyber weapons represent to national security is overstated and the threat of cyber war is **overstated**.

The US and likely other **highly networked nations** appear **reticent** about using cyber weapons for significant cyber conflict given their **vulnerabilities**. Ironically, NSA programs such as PRISM have made the US more of a target given the sheer volume of sensitive information stored in one place. Regardless of US defences, there is no way to make this information completely secure from intrusion, and as such, the very act of storing the information makes them more vulnerable.

Rid (2012) is among some academics who argue that cyber war has never and will likely **never eventuate**. The benefits of being on this side of the debate mean that public funding can be allocated away from offensive cyber security initiatives to other, potentially more important initiatives, such as public health and housing. The government is constantly under pressure to prioritise public spending and it is imperative that they have realistic, accurate projections regarding the risk of cyber war, the probability and the impact, to allow them to focus spending on the most important areas.

**Cyber threats are *OVERBLOWN* – most recent studies prove**

**Maschmeyer & Kostyuk 2/8**/2022

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The specter of cyber war is back. Not only does Russia’s massive military buildup along Ukraine’s borders bring a growing risk of the largest-scale military clash since World War II, but many analysts stress the potential for destabilizing and devastating cyber-attacks in its wake. Jason Healey predicts that if Russia invades, “the opening salvo is likely to be with offensive cyber capabilities.” William Courtney and Peter A. Wilson from RAND warn of the “massive employment” of cyber warfare tools to create “shock and awe causing Ukraine’s defenses or will to fight to collapse.” Accordingly, the United States and the United Kingdom have deployed cyber warfare teams to help Ukraine defend against an impending strategic cyber strike against critical infrastructure. Some go further, suggesting that Russia may not need to use military force at all, because cyber strikes can “achieve much **the same effect** from across the border.” This assessment is apparently shared by policymakers working on countering the Russian threat to Ukraine, with an (anonymous) senior Biden administration official recently stating as much.

These predictions suggest that cyber operations will provide significant strategic advantages to Russia either as complements to military force, or as standalone instruments — or at least that policymakers and commentators think that they will. Current warnings of escalating cyber warfare conjure deep-seated fears of cyber doom and the recurring specter of a “**cyber Pearl Harbor**” strategic surprise attack. In practice, **however**, **cyber warfare has been a failure**. Our research shows **that cyber operations have remained irrelevant on the battlefield**, while standalone operations to weaken Ukraine through election interference, critical infrastructure sabotage, and economic disruption largely failed to contribute to Russia’s strategic goals of making Ukraine abandon its pro-European Union and pro-NATO foreign policy. Consequently, current fears of cyber warfare defy not only Russia’s track record in Ukraine, but also strategic logic. Given that Russia’s cyber operations **have failed** to produce significant strategic value to date, **why would we expect this to suddenly change now**? Or, to put it more pointedly: If cyber operations offer such effective and potent instruments, why did Russia go through the trouble (and costs) to mobilize its troops? **Current predictions of cyber onslaught do not offer a persuasive answer**.

Giving in to these fears risks fighting phantom threats, playing into Russia’s hands by distracting from the need to counter its military threat and sowing fear and confusion — at least among Western audiences. A level-headed analysis of the threat that distinguishes what is theoretically possible from what is practically feasible is urgently needed. Our research suggests that, contrary to hysteria, cyber operations **will remain of secondary importance** and at best provide marginal gains to Russia.

**2NC/1NR – Cyber Attacks wont trigger Article V**

**New attacks against NATO, Finland, or Sweden are *UNLIKELY* to trigger article V**

**The Hill 5/14**/2022

“Finland, Sweden’s NATO moves prompt fears of Russian cyberattacks”, <https://thehill.com/policy/cybersecurity/3488518-finland-swedens-nato-moves-prompt-fears-of-russian-cyber-attacks/>

“I think it’s unlikely that Russia will launch the types of cyberattacks against Finland and Sweden like it did with Ukraine, primarily **because the aims are different**,” said Jason Blessing, a fellow at the American Enterprise Institute.

Blessing said that since Russia has no intention, at least for the moment, to invade Finland or Sweden, it may use different cyber tactics than it did with Ukraine to get its message across.

He added that it’s likely that Russia will launch unsophisticated types of attacks including website defacement and distributed denial-of-service attacks to disrupt its enemies’ networks rather than starting a **full-scale cyber warfare**.

**Russian cyberattacks on Finland and Sweden wont trigger follow-up military actions**

**Orenstein 6/7**/2022

Mitchell Orenstein is a Senior Fellow at FPRI’s Eurasia Program and Professor and Chair of Russian and Eastern European Studies at the University of Pennsylvania, “Russia’s Use of Cyberattacks: Lessons from the Second Ukraine War”, <https://www.fpri.org/article/2022/06/russias-use-of-cyberattacks-lessons-from-the-second-ukraine-war/> -- ECM

Russia also deploys cyberattacks as a poignant warning or **threat**, often to put more force behind diplomatic actions.

For instance, on April 8, 2022, while Ukrainian President Zelensky gave an invited address to the Finnish Parliament, the Finnish foreign and defense ministries were hit by a distributed denial of service attack. Finnish government systems were back up in an hour, but given the circumstances, this cyberattack appears to have been designed to signal Russia’s displeasure with Finland’s plans to join NATO and its support of Ukraine. This attack was presaged by Russian diplomatic statements warning Finland of “**retaliatory steps” to joining NATO**. To date, it remains the only significant cyberattack against Finland or Sweden as they planned their applications to join the alliance. This attack bears similarities to other instances where Russia used cyberattacks to emphasize diplomatic warnings.

Following the 2015 doping scandal that resulted in the Russian Olympic team being banned from the Olympics through 2022, Russian military intelligence launched a significant cyberattack against the Swedish Sports Confederation while Sweden was issuing a bid to host the 2026 Winter Olympics. These cyberattacks were part of a “systematic campaign” targeting FIFA, the World Anti-Doping Agency, and the United States Anti-Doping Agency in furtherance of diplomatic goals rather than military or societal disruption.

Three Distinct Uses of Cyberattacks

Russia uses cyberattacks in three different ways. First, it deploys cyberattacks to prepare and facilitate military conflict by attacking critical infrastructure such as government websites, IT servers, banks, media outlets, and power plants. As the Second Ukraine War shows, Russia seeks to disrupt and disable **critical infrastructure to advance its military goals**.

Russia also deploys cyberattacks **as part of a hybrid war strategy** that substitutes for war. These attacks may be persistent over longer periods of time. However, Russia deploys cyberattacks in smaller quantities and often combined with other hybrid or political war techniques, such as disinformation campaigns and civil actions in targeted countries. **In these instances**, **Russia does not** appear to intend imminent military action, but may seek to degrade defensive capabilities.

Cyberattacks may also be deployed as a more isolated threat signal and complement to diplomatic warnings, when a country takes actions that Russia interprets as unfriendly. For these purposes, cyberattacks are more frequently combined with traditional diplomacy.

**2NC/1NR – XT 2 & 3 No Escalation**

**Empirics prove – You should subscribe a low risk to their advantage**

**Orenstein 6/7**/2022

Mitchell Orenstein is a Senior Fellow at FPRI’s Eurasia Program and Professor and Chair of Russian and Eastern European Studies at the University of Pennsylvania, “Russia’s Use of Cyberattacks: Lessons from the Second Ukraine War”, <https://www.fpri.org/article/2022/06/russias-use-of-cyberattacks-lessons-from-the-second-ukraine-war/> -- ECM

**The empirical record of cyber conflict**, however, suggests that what is feasible in practice is far more **limited**. Ukraine has been a “giant test lab” where Russia, one of the world’s foremost cyber powers, has experimented with cyber operations for eight years. Yet these operations **have failed** to produce significant strategic value either as force complements or standalone tools.

The substitutability argument — that states can or do substitute cyber operations for the use of force — has little empirical support since Russia levied no major cyber operations against Ukraine in the runup to the military escalation of the conflict in 2014. While it is possible that we do not know about such operations given their veil of secrecy, it is clear that any attempted but undetected cyber surprise strike failed to produce any measurable effects.

Evidence supporting the complementarity perspective is similarly sobering. One of us has examined the role of low-level disruptive cyber operations in the military conflict and their relevance for battlefield events (and outcomes). Disruptive attacks can directly affect military operations as they seek to sabotage an opponent’s ability to fight. For example, the Russia-backed separatists in the Donbas and Luhansk regions used malware to retrieve data from mobile devices on the locations of Ukrainian artillery troops, facilitating better reconnaissance against these troops. Pro-Ukrainian hackers hijacked CCTV cameras behind enemy lines to obtain intelligence on the movement of Russian artillery in the separatist-controlled territories.

Focusing on the period of the most intense fighting, between 2014 and 2016 — the time when, if cyber tools are an effective complement to armed force, Russia would have been most likely to use them — we applied a series of statistical tests to thousands of cyber and military operations. **The findings showed a strong, escalatory dynamic between military operations by both sides but no significant correlation in either direction between military and cyber operations**, **and no reciprocity between cyber op**eration**s**. This evidence demonstrates that in one of the first armed conflicts where both sides used low-level cyber operations extensively, digital operations unfolded independently from the events on the ground and had no discernible effect on them. Hence, in stark contrast to expectations about the force-multiplying advantages of cyber operations, these findings suggest hacking groups faced considerable difficulties in responding to battlefield events, much less shaping them.

**Limiting challenges mean no risk of cyber doom**

**Orenstein 6/7**/2022

Mitchell Orenstein is a Senior Fellow at FPRI’s Eurasia Program and Professor and Chair of Russian and Eastern European Studies at the University of Pennsylvania, “Russia’s Use of Cyberattacks: Lessons from the Second Ukraine War”, <https://www.fpri.org/article/2022/06/russias-use-of-cyberattacks-lessons-from-the-second-ukraine-war/> -- ECM

Considering the underwhelming track record of cyber warfare in Ukraine to date, **there is little reason to expect cyber doom of the kind** that some now predict. For these warnings of a Russian cyber onslaught to become reality, cyber operations would need to produce effects at a scope and scale that they have previously failed to attain. Importantly, current warnings fail to make a persuasive case on why we should expect such a transformation.

Rather, they rest on the implicit assumption that with the change in strategic context, the role of cyber operations will change as well. This comes out clearest in Maggie Miller’s recent commentary suggesting that military escalation in Ukraine would finally herald “**a true cyberwar**” where Russia could “take down the power grid” or launch a disinformation campaign to undermine the government in Kyiv. Dmitri Alperovitch offers a more level-headed analysis, underlining that cyber operations alone will fall short of achieving Russia’s goals. However, he also suggests that they can complement force as an “extension of warfare itself,” disrupting command and control to provide battlefield advantages, sabotaging critical infrastructure, and undermining public trust in the government to “send a powerful signal that resistance is futile.” **Yet**, as we have seen, Russia has attempted most of these objectives in the past and has failed. Even in a full-scale invasion, we have the same aggressor, with the same hacking groups, with the same skill level going after the same sets of possible targets. Why would we expect different results?

Changing the strategic context of deployment does not change the mechanism of action that cyber operations rely upon to produce outcomes — and its intrinsic constraints. Cyber operations rely on a mechanism of subversion that exploits vulnerabilities in adversary systems to use them against the adversary. This mechanism holds great strategic promise but poses **significant operational challenges**. It requires creativity and cunning to remotely manipulating complex systems that others designed and operate without alerting the victim to one’s presence. These challenges produce an operational trilemma between the speed, intensity of effects, and level of control that actors have over these effects. This trilemma limits strategic value, since **in most circumstances** cyber operations will be **too slow, too weak, and too volatile** to contribute measurably to strategic goals. The constraining role of this trilemma is evident across all five of Russia’s disruptive cyber operations against Ukraine thus far, underlining their relevance. Importantly, **all available** evidence indicates that these intrinsic constraints limit the strategic value of cyber operations regardless of strategic contexts.

**No large-scale cyber-attacks or retaliation**

**Nye 19**

Dr. Joseph S., Jr., University Distinguished Service Professor and Former Dean of the Kennedy School of Government at Harvard University, “Global Cyber Conflicts Will Be Hard To Control”, The Statesman (Pakistan), 10/14/2019, Lexis

The problem of perceptions and controlling escalation is not new. In August 1914, the major European powers expected a short and sharp “Third Balkan War.” The troops were expected to be home by Christmas. After the assassination of the Austrian archduke in June, Austria-Hungary wanted to give Serbia a bloody nose, and Germany gave its Austrian ally a blank check rather than see it humiliated. But when the Kaiser returned from vacation at the end of July and discovered how Austria had filled in the check, his efforts to de-escalate were too late. Nonetheless, he expected to prevail and almost did.

Had the Kaiser, the Czar, and the Emperor known in August 1914 that a little over four years later, all would lose their thrones and see their realms dismembered, they would not have gone to war. Since 1945, nuclear weapons have served as a crystal ball in which leaders can glimpse the catastrophe implied by a major war. After the Cuban Missile Crisis in 1962, leaders learned the importance of de-escalation, arms-control communication, and rules of the road to manage conflict.

Cyber technology, of course, lacks the clear devastating effects of nuclear weapons, and that poses a different set of problems, because there is no crystal ball. During the Cold War, the great powers avoided direct engagement, but that is not true of cyber conflict. And yet the threat of cyber **Pearl Harbor**s has been **exaggerated**. Most cyber conflicts occur **below the threshold** established by the rules of armed conflict. They are **economic** and **political**, rather than **lethal**. It is **not credible** to threaten a **nuclear response** to cyber theft of intellectual property by China or cyber meddling in elections by Russia.

According to American doctrine, deterrence is not limited to a cyber response (though that is possible). The US will respond to cyberattacks across domains or sectors, with any weapons of its choice, **proportional** to the damage that has been done. That can range from **naming** and **shaming** to economic sanctions to kinetic weapons. Earlier this year, a new doctrine of “persistent engagement” was described as not only disrupting attacks, but also helping to reinforce deterrence. But the technical overlap between intrusion into networks to gather intelligence or disrupt attacks and to carry out offensive operations often makes it difficult to distinguish between escalation and de-escalation. Rather than relying on tacit bargaining, as proponents of “persistent engagement” sometimes emphasize, explicit communication may be necessary to limit escalation.

**Case – Heg**

**1NC vs Heg ADV**

**Hegemony is unsustainable – a peaceful transition toward offshore balancing prevents economic crisis, prolif, terrorism**

**Walt 19**

Stephen - Robert and Renée Belfer Professor of International Affairs at the Harvard Kennedy School and the author of **Error! Hyperlink reference not valid.**, "The End of Hubris," Foreign Affairs, https://www.foreignaffairs.com/articles/2019-04-16/end-hubris

Today's world presents a seemingly endless array of challenges: a more powerful and [assertive China](https://www.foreignaffairs.com/articles/china/china-plan-rule-asia), novel threats from cyberspace, a rising tide of refugees, resurgent xenophobia, persistent strands of violent extremism, climate change, and many more. But the more complex the global environment, the more Washington needs clear thinking about its vital interests and foreign policy priorities. Above all, a successful [U.S. grand strategy](https://www.foreignaffairs.com/topics/grand-strategy) must identify where the United States should be prepared to wage war, and for what purposes. For all the talk of how U.S. foreign policy and the country's place in the world will never be the same after the presidency of Donald Trump, the best strategic road map for the United States is a familiar one. Realism-the hard-nosed approach to foreign policy that guided the country throughout most of the twentieth century and drove its rise to great power-remains the [best option](https://www.foreignaffairs.com/articles/world/2018-06-14/realist-world). A quarter century ago, after the Cold War ended, foreign policy elites abandoned realism in favor of an unrealistic grand strategy-liberal hegemony-that has weakened the country and caused considerable harm at home and abroad. To get back on track, Washington should return to the realism and restraint that served it so well in the past. If Washington rediscovered realism, the United States would seek to preserve the security and prosperity of the American people and to protect the core value of liberty in the United States. Policymakers would recognize the importance of military strength but also take into account the country's favorable geographic position, and they would counsel restraint in the use of force. The United States would embrace a strategy of "offshore balancing" and abstain from crusades to remake the world in its image, concentrating instead on maintaining the balance of power in a few key regions. Where possible, Washington would encourage foreign powers to take on the primary burden for their own defense, and it would commit to defend only those areas where the United States has vital interests and where its power is still essential. Diplomacy would return to its rightful place, and Americans would promote their values abroad primarily by demonstrating democracy's virtues at home. IF IT AIN'T BROKE... In the eighteenth and nineteenth centuries, when the United States was weak, leaders from George Washington to William McKinley mostly avoided foreign entanglements and concentrated on building power domestically, expanding the country's reach across North America and eventually expelling the European great powers from the Western Hemisphere. In the first half of the twentieth century, U.S. presidents such as Woodrow Wilson and Franklin Roosevelt used the country's newfound strength to restore the balance of power in strategically critical regions outside the Western Hemisphere. But they let other great powers do most of the heavy lifting, and thus the United States emerged relatively unscathed-and stronger than ever-from the world wars that devastated Asia and Europe. Letting other states shoulder the burden was not possible during the Cold War, so the United States stepped up and led the alliances that contained the Soviet Union. American leaders paid lip service to democracy promotion, human rights, and other idealistic concerns, but U.S. policy was [realist at its core](https://www.foreignaffairs.com/articles/2018-08-28/truth-about-liberal-order). Through the Bretton Woods system and its successors, the United States also helped foster a more open world economy, balancing economic growth against the need for financial stability, national autonomy, and domestic legitimacy. Put simply, for most of U.S. history, American leaders were acutely sensitive to the balance of power, passed the buck when they could, and took on difficult missions when necessary. But when the Soviet Union collapsed and the United States found itself, as the former national security adviser Brent Scowcroft put it in 1998, "standing alone at the height of power . . . with the rarest opportunity to shape the world," U.S. leaders rejected the realism that had worked well for decades and tried to remake global politics in accordance with American values. A new strategy-[liberal hegemony](https://www.foreignaffairs.com/articles/world/2018-06-14/liberal-world)-sought to spread democracy and open markets across the globe. That goal is the common thread linking President Bill Clinton's policy of "engagement and enlargement," President George W. Bush's "freedom agenda," and President Barack Obama's embrace of the Arab revolts of 2010-11 and his declaration that "there is no right more fundamental than the ability to choose your leaders and determine your destiny." Such thinking won broad support from both political parties, the federal bureaucracies that deal with international affairs, and most of the think tanks, lobbies, and media figures that constitute the foreign policy establishment. At bottom, liberal hegemony is a highly revisionist strategy. Instead of working to maintain favorable balances of power in a few areas of vital interest, the United States sought to transform regimes all over the world and recruit new members into the economic and security institutions it dominated. The results were dismal: failed wars, financial crises, staggering inequality, frayed alliances, and emboldened adversaries. HEGEMONIC HUBRIS When Clinton took office in 1993, the United States was on favorable terms with the world's other major powers, including China and Russia. Democracy was spreading, Iraq was being disarmed, and Iran had no nuclear enrichment capacity. The Oslo Accords seemed to herald an end to the Israeli-Palestinian conflict, and Washington seemed well positioned to guide that process. The European Union was adding new members and moving toward a common currency, and the U.S. economy was performing well. Americans saw terrorism as a minor problem, and the U.S. military seemed unstoppable. The wind was at the country's back. Life was good. But those circumstances fueled a dangerous overconfidence among American elites. Convinced that the United States was "the indispensable nation," as Secretary of State Madeleine Albright famously put it in 1998, they believed they had the right, the responsibility, and the wisdom to shape political arrangements in every corner of the world. That vision turned out to be a hubristic fantasy. Repeated attempts to broker peace between the Israelis and the Palestinians all failed, and the two-state solution sought by three U.S. presidents is no longer a viable option. Al Qaeda attacked the U.S. homeland on September 11, 2001, and Washington responded by launching a global war on terrorism, including invasions of Afghanistan and Iraq. Those campaigns were costly failures and shattered the U.S. military's aura of invincibility. Much of the Middle East is now embroiled in conflict, and violent extremists operate from Africa to Central Asia and beyond. Meanwhile, India, Pakistan, and North Korea tested and deployed nuclear weapons, and Iran become a latent nuclear weapons state. The collapse of the U.S. housing market in 2008 exposed widespread corruption in the country's financial institutions and triggered the [worst economic crisis](https://www.foreignaffairs.com/articles/2018-09-13/crisis-next-time) since the Great Depression-a calamity from which the global economy has yet to fully recover. In 2014, Russia seized Crimea, and it has interfered in a number of other countries since then-and its relations with the West are now worse than at any time since the Cold War. China's power and ambitions have expanded, and cooperation between Beijing and Moscow has deepened. The eurozone crisis, the United Kingdom's decision to withdraw from the EU, and energetic populist movements have raised doubts about the EU's future. Democracy is in retreat worldwide; according to Freedom House, 2018 was the 13th consecutive year in which global freedom declined. Illiberal leaders govern in Hungary and Poland, and the Economist Intelligence Unit's annual Democracy Index has downgraded the United States from a "full" to a "flawed" democracy. The United States was not solely responsible for all these adverse developments, but it played a major role in most of them. And the taproot of many of these failures was Washington's embrace of liberal hegemony. For starters, that strategy expanded U.S. security obligations without providing new resources with which to meet them. The policy of "dual containment," aimed at Iran and Iraq, forced the United States to keep thousands of troops on the Arabian Peninsula, an additional burden that also helped convince Osama bin Laden to strike at the U.S. homeland. NATO expansion committed Washington to defend weak and vulnerable new members, even as France, Germany, and the United Kingdom let their military forces atrophy. Equally important, U.S. efforts to promote democracy, the open-ended expansion of NATO, and the extension of the alliance's mission far beyond its original parameters poisoned relations with Russia. And fear of U.S.-led regime change encouraged several states to pursue a nuclear deterrent-in the case of North Korea, successfully. When the United States did manage to topple a foreign foe, as it did in Afghanistan, Iraq, and Libya, the results were not thriving new democracies but costly occupations, failed states, and hundreds of thousands of dead civilians. It was delusional for U.S. leaders to expect otherwise: creating a functional democracy is a difficult process under the best of circumstances, but trying to do it in fractured societies one barely understands is a fool's errand. Finally, globalization [did not deliver](https://www.foreignaffairs.com/articles/united-states/2018-10-15/how-save-globalization) as promised. Opening up markets to trade and investment brought great benefits to lower and middle classes in China, India, and other parts of the developing world. It also further magnified the already staggering wealth of the world's richest one percent. But lower- and middle-class incomes in the United States and Europe remained flat, jobs in some sectors there fled abroad, and the global financial system became much more fragile. This sorry record is why, in 2016, when Trump called U.S. foreign policy "a complete and total disaster" and blamed out-of-touch and unaccountable elites, many Americans nodded in agreement. They were not isolationists; they simply wanted their government to stop trying to run the world and pay more attention to problems at home. Trump's predecessors seemed to have heard that message, at least when they were running for office. In 1992, Clinton's mantra was "It's the economy, ~~stupid~~." In 2000, Bush derided Clinton's efforts at "nation building" and called for a foreign policy that was "strong but humble." Obama pledged to end foreign wars and focus on "nation building at home." These expressions of restraint were understandable, as surveys had repeatedly shown that a majority of Americans believed the country was playing the role of global policeman more than it should and doing more than its share to help others. According to the Pew Research Center, in 2013, 80 percent of Americans agreed that "we should not think so much in international terms but concentrate more on our own national problems and building up our strength and prosperity here at home," and 83 percent wanted presidents to focus more on domestic issues than on foreign policy. Clinton, Bush, and Obama all understood what the American people wanted. But they failed to deliver it. So has Trump. Although his Twitter feed and public statements often question familiar orthodoxies, the United States is still defending wealthy NATO allies, still fighting in Afghanistan, still chasing terrorists across Africa, still giving unconditional support to the same problematic Middle Eastern clients, and still hoping to topple a number of foreign regimes. Trump's style as president is radically different from those of his predecessors, but the substance of his policies is [surprisingly similar](https://www.foreignaffairs.com/articles/united-states/2017-06-13/trump-traditionalist). The result is the worst of both worlds: Washington is still pursuing a misguided grand strategy, but now with an incompetent vulgarian in the White House. REALISM IN PRACTICE Four presidents have now pursued a grand strategy built around the goal of American hegemony, and all four have fared poorly. As the political scientist John Mearsheimer and I have argued previously [in these pages](https://www.foreignaffairs.com/articles/united-states/2016-06-13/case-offshore-balancing), it is time for the United States to return to its traditional approach of offshore balancing. This strategy begins by recognizing that the United States remains the most secure power in modern history. It has thousands of nuclear weapons and powerful conventional forces, and it faces no serious rivals in the Western Hemisphere. The Atlantic and Pacific Oceans still insulate the country from many threats, giving U.S. leaders enormous latitude in choosing where and when to fight. In addition to working to maintain U.S. hegemony in the Western Hemisphere, American policymakers have long sought to prevent other great powers from imitating the United States by dominating their own regions. A peer competitor with no serious rivals nearby would be free to project power around the world-as Washington has for decades. From an American perspective, it is better if the major powers in Eurasia have to keep a wary eye on one another, making it harder for them to interfere near American shores. The United States intervened in the world wars to prevent Wilhelmine Germany, Nazi Germany, and imperial Japan from dominating Europe and Asia. This same principle inspired the Cold War strategy of containment, although in that case, the United States could not pass the buck and had to bear most of the costs itself. Today, there is no potential regional hegemon in Europe, whose states should gradually take [full responsibility](https://www.foreignaffairs.com/articles/europe/2017-08-15/pay-europe) for their own defense. The countries of the European Union are home to more than 500 million people and boast a combined annual GDP exceeding $17 trillion, whereas Russia-the main external threat to EU states-has a population of just 144 million and an annual GDP of only $1.6 trillion. Moreover, NATO's European members together annually spend more than three times what Russia does on defense. The idea that the EU (whose roster includes two nuclear-armed powers) lacks the wherewithal to defend itself against a neighbor whose economy is smaller than Italy's is risible. NATO still has ardent defenders on both sides of the Atlantic, but they are living in the past. The alliance played an invaluable role in containing the Soviet Union and preventing the return of an aggressive, expansionist Germany. But the Soviet Union is long gone, and Germany is now a liberal democracy firmly committed to the status quo. NATO's leaders have worked overtime to devise new missions since the Berlin Wall came down, but the alliance's attempts at nation building in the Balkans, Afghanistan, and Libya have not gone well. Unless NATO's European members decide to back a U.S.-led effort to balance against China (and it is not clear that they will or should), it is time for the United States to gradually disengage from NATO and turn European security over to the Europeans by beginning a coordinated withdrawal of U.S. military forces from Europe, allowing a European officer to serve as NATO's supreme allied commander, and making it clear that the United States will no longer be Europe's first line of defense. Washington should take these steps not with rancor or resentment but with a sense of accomplishment and a commitment to cooperate on issues on which American and European interests align, such as climate change, counterterrorism, and the management of the world economy. Washington should also return to its traditional approach to the Middle East. To ensure access to the energy supplies on which the world economy depends, the United States has long sought to prevent any country from dominating the oil-rich Persian Gulf. But until the late 1960s, it did so by relying on the United Kingdom. After the British withdrew, Washington relied on regional clients, such as Iran, Israel, and Saudi Arabia. U.S. forces stayed offshore until January 1991, a few months after Saddam Hussein, the leader of Iraq, seized Kuwait. In response, the George H. W. Bush administration assembled a coalition of states that liberated Kuwait, decimated Iraq's military, and restored balance to the region. Today, Washington's primary goal in the Middle East remains preventing any country from impeding the flow of oil to world markets. The region is now deeply divided along several dimensions, with no state in a position to dominate. Moreover, the oil-producing states depend on revenue from energy exports, which makes all of them eager to sell. Maintaining a regional balance of power should be relatively easy, therefore, especially once the United States ends its counterproductive efforts to remake local politics. U.S. forces in Iraq and Syria would be withdrawn, although the United States might still maintain intelligence-gathering facilities, prepositioned equipment, and basing arrangements in the region as a hedge against the need to return in the future. But as it did from 1945 to 1991, Washington would count on local powers to maintain a regional balance of power in accordance with their own interests. As an offshore balancer, the United States would establish normal relations with all countries in the region, instead of having "special relationships" with a few states and profoundly hostile relations with others. No country in the Middle East is so virtuous or vital that it deserves unconditional U.S. support, and no country there is so heinous that it must be treated as a pariah. The United States should act as China, India, Japan, Russia, and the EU do, maintaining normal working relationships with all states in the region-[including Iran](https://www.foreignaffairs.com/articles/iran/2018-10-24/pompeos-dangerous-delusions). Among other things, this policy would encourage rival regional powers to compete for U.S. support, instead of taking it for granted. For the moment, Washington should also make it clear that it will reduce its support for local partners if they repeatedly act in ways that undermine U.S. interests or that run contrary to core U.S. values. Should any state threaten to dominate the region from within or without in the future, the United States would help the rest balance against it, calibrating its level of effort and local presence to the magnitude of the danger. With its relationships with Europe and the Middle East right-sized and rationalized, an offshore-balancing United States could focus primarily on the country that is its only potential peer competitor and the world's only other would-be regional hegemon: China. If China's power continues to grow, it is likely to press its neighbors to distance themselves from Washington and accept China as the dominant power in the Asia-Pacific. Were China to become a regional hegemon in Asia, it would be better positioned to project power around the world and extend its influence into the Western Hemisphere. To counter this possibility, the United States should maintain and deepen its current security ties with Australia, Japan, the Philippines, and South Korea and continue to nurture its strategic partnerships with India, Singapore, and Vietnam. Once the United States is no longer subsidizing its wealthy European allies or squandering trillions of dollars on costly quagmires in the greater Middle East, it can more readily afford the military capabilities needed to balance China. Maintaining an effective Asian coalition will not be easy, however. Washington's Asian allies are separated from one another by water and vast distances, and they are reluctant to jeopardize their commercial ties with China. The relationship between Japan and South Korea has a troubled history that makes close cooperation difficult. Local powers will be tempted to let Washington do most of the work, and sophisticated U.S. leadership will be necessary to hold this coalition together and ensure that each member contributes its fair share. Trump's missteps-abandoning the Trans-Pacific Partnership, starting trade disputes with Japan and South Korea, and indulging in an amateurish flirtation with North Korea-have not helped. OFFSHORE VENTURE Defenders of the status quo will no doubt mischaracterize this course of action as a return to isolationism. That is nonsense. As an offshore balancer, the United States would be deeply engaged diplomatically, economically, and, in some areas, militarily. It would still possess the world's mightiest armed forces, even if it spent somewhat less money on them. The United States would continue to work with other countries to address major global issues such as climate change, terrorism, and cyberthreats. But Washington would no longer assume primary responsibility for defending wealthy allies that can defend themselves, no longer subsidize client states whose actions undermine U.S. interests, and no longer try to spread democracy via regime change, covert action, or economic pressure. Instead, Washington would use its strength primarily to uphold the balance of power in Asia-where a substantial U.S. presence is still needed-and would devote more time, attention, and resources to restoring the foundations of U.S. power at home. By setting an example that others would once again admire and seek to emulate, an offshore-balancing United States would also do a better job of promoting the political values that Americans espouse. This approach would also involve less reliance on force and coercion and a renewed emphasis on diplomacy. Military power would remain central to U.S. national security, but its use would be as a last resort rather than a first impulse. It is worth remembering that some of Washington's greatest foreign policy achievements-the Marshall Plan, the Bretton Woods system, the Egyptian-Israeli peace treaty, and the peaceful reunification of Germany-were diplomatic victories, not battlefield ones. In recent years, however, both Democratic and Republican administrations have tended to eschew genuine diplomacy and have relied instead on ultimatums and pressure. Convinced they hold all the high cards, too many U.S. officials have come to see even modest concessions to opponents as tantamount to surrender. So they have tried to dictate terms to others and have reached for sanctions or the sword when the target state has refused to comply. But even weak states are reluctant to submit to blackmail, and imposing one-sided agreements on others makes them more likely to cheat or renege as soon as they can. For diplomacy to work, both sides must get some of what they want. Moreover, offshore balancing requires a sophisticated understanding of regional politics, which only knowledgeable diplomats and area specialists can provide. In particular, creating an effective coalition to check China's ambitions in Asia will be as much a diplomatic task as a military mission, and success would depend on a deep bench of officials who are intimately familiar with the history, languages, cultures, and sensitivities of the region. A return to offshore balancing should also be accompanied by a major effort to rebuild and professionalize the U.S. diplomatic corps. Ambassadorships should be reserved for qualified diplomats rather than VIPs or campaign donors, and the State Department must develop, refine, and update its diplomatic doctrine-the ways the United States can use noncoercive means of influence-much as the armed services continually refine the military doctrines that guide their conduct in war. The ranks of the Foreign Service should be significantly increased, and as their careers advance, career diplomats should receive the same opportunities for professional education that senior military officers currently enjoy. OUT WITH THE OLD Despite the disappointments of the past 25 years, the American foreign policy elite remains convinced that global leadership is their birthright and that Washington must continue trying to force other countries to conform to U.S. dictates. This perspective is an article of faith at almost every foreign policy think tank inside the Beltway and is repeatedly invoked in task-force reports, policy briefs, and op-eds. A similar groupthink pervades the U.S. media, where unrepentant neoconservatives and unchastened liberal internationalists monopolize the ranks of full-time pundits; proponents of realism, restraint, and nonintervention appear sporadically at best. The result is that foreign policy debates are heavily skewed in favor of endless intervention. Moving back to a more realist grand strategy will require broadening the parameters of debate and challenging the entrenched interests that have promoted and defended a failed foreign policy. The clubbiness of the foreign policy establishment has also produced a disturbing lack of accountability. Although the community contains many dedicated, imaginative, and honorable individuals, it is dominated by a highly networked caste of insiders who are reluctant to judge one another lest they be judged themselves. As a result, error-prone officials routinely fail upward and receive new opportunities to repeat past mistakes. Consider the officials responsible for (and the commentators who cheered on) the bungled Middle East peace process, the misguided expansion of NATO, the botched wars in Afghanistan and Iraq, the CIA's torture of detainees in the war on terrorism, the National Security Agency's warrantless surveillance of Americans, the disastrous NATO intervention in Libya, and the American machinations in Ukraine that gave Russia a pretext to seize Crimea. None of those officials or commentators has suffered significant professional penalties for his or her mistakes or malfeasance. Indeed, nearly all of them still enjoy prominent positions in government, think tanks, the media, or academia. No one is infallible, of course, and a desire to hold people accountable could be taken too far. Policymakers often learn from past mistakes and become more effective over time. But when the same people keep making the same errors and neither recognize nor regret them, it is time to look for new people with better ideas. Despite the stagnation within the foreign policy establishment, the prospects for a more realist, more restrained U.S. foreign policy are better today than they have been in many years. For all his flaws, Trump has made it easier to propose alternatives to liberal hegemony by expressing such disdain for the elite consensus. Younger Americans are more skeptical of their country's imperial pretensions than are their elders, and some new members of Congress seem bent on clawing back some of the control over foreign policy that presidents have amassed over the past 70 years. Furthermore, powerful structural forces are working against liberal hegemony and in favor of offshore balancing. China's rise and the partial revival of Russian power are forcing the United States to pay closer attention to balance-of-power politics, especially in Asia. The intractable problems of the Middle East will make future presidents reluctant to squander more blood and treasure there-especially in chasing the siren song of democracy promotion. Pressure on the defense budget is unlikely to diminish, especially once the costs of climate change begin to bite, and because trillions of dollars' worth of domestic needs cry out for attention. For these reasons, the foreign policy elite will eventually rediscover the grand strategy that helped build and sustain American power over most of the nation's history. The precise path remains uncertain, and it will probably take longer to get there than it should. But the destination is clear.

**China will never match US hegemony – but maintaining offensive postures makes war from Chinese decline inevitable**

**Beckley 20**

Michael, Tufts University; American Enterprise Institute, “Conditional Convergence and the Rise of China: A Political Economy Approach to Understanding Global Power Transitions”, Journal of Global Security Studies DB

The conventional wisdom about current trends in the balance of power relies heavily on power transition theory, which assumes that economic convergence is an unconditional process in which poorer countries inevitably catch up with richer countries. **Economists**, however, **have shown that convergence is rare and conditional on a set of geographic, institutional, and demographic factors that, so far, have not been incorporated into major theories of international change**. In this article, I have discussed these factors and analyzed the growth prospects of the United States and China in light of them. **The results cast doubt on China’s ability to rival the United States as an economic and military superpower**. The good news is that **the world is unlikely to experience a full-blown hegemonic rivalry anytime soon**. This is an extraordinary development for global security. In the past five hundred years alone, there have been sixteen hegemonic competitions in which a rising power challenged a ruling power for top-dog status. Twelve of them ended in catastrophic wars, and even some of the peaceful cases were brutal cold wars that inflicted tremendous harm. During the Cold War, for example, the United States and the Soviet Union divided the globe into rival blocs, waged proxy wars that killed millions of people, and brought the world to the brink of nuclear Armageddon. Today, by contrast, the United States does not face a peer competitor, and the world, though far from perfect, is more peaceful and prosperous than ever before. The bad news is that **China may become more authoritarian at home and aggressive abroad as its economic growth slows, and this shift may undermine global security in numerous areas**. **History suggests that when a rising power peaks and starts to decline before its ambitions have been fulfilled, its people tend to become disgruntled, and its leaders usually respond by suppressing domestic dissent and demonizing foreign adversaries**. Russia, for example, has become more hostile, revanchist, and disruptive since the collapse in world oil prices in the late 2000s gutted the Russian economy and crimped President Vladimir Putin’s popularity. China seems to be going down a similar path. Over the past decade, China’s economic growth rates have been cut in half, and the Chinese government has responded by massively expanding its internal security system, exporting parts of that system to other countries, waging information warfare on democratic countries, promoting “internet sovereignty,” flouting international trade rules, and ramping up its military presence on and around disputed features in the East and South China Seas in flagrant violation of international law. These actions may be just a preview of what is to come in the years ahead, as the economic, geographic, and demographic problems highlighted above grow worse. Trade disputes and territorial conflicts are only the most obvious risks posed by a stagnating and recalcitrant China. Less obvious are transnational problems, such as climate change and disease, which may fester without Chinese cooperation. Avoiding this fate requires other countries, and especially the United States, to handle China with a blend of reassurance and deterrence. **Unfortunately, the widespread view that China is an emerging superpower has caused the United States to abandon engagement in favor of unbridled competition**. In just the past few years, the United States has labeled China a rival, imposed steep tariffs on Chinese goods and severe restrictions on Chinese investment and immigration, **inserted US forces into East Asian territorial disputes**, and made plans to hit China early and hard in the event of war. **This competition has not only increased the risk of US–China conflict but also threatened global security by hamstringing the World Trade Organization and effectively killing the Paris Climate Accord and the Intermediate Nuclear Forces Treaty**. Thus, **the stage has been set for tragic conflict: China is becoming more recalcitrant as it suffers slowing growth, while the United States, consumed by false prophecies of China’s inexorable rise, is becoming more confrontational**. **The main threat to global security, therefore, is not a US-China power transition driven by economic convergence but divergence in US and Chinese perceptions about the long-term trends in the balance of power**. **China may not be able to stem its growth slowdown, but Americans can take note of it and recalibrate US policy accordingly**.

**Unipolarity is statistically the most conflict-prone system.**

**Monteiro 14**

Assistant Professor of Political Science at Yale [Nuno, *Theory of Unipolar Politics*, p. 181-184

At the same time, the first two-and-a-half decades of our unipolar system have been anything but peaceful in what concerns U.S, involvement in interstate conflict. U.S. forces have been employed in four interstate wars – Kuwait (1991), Kosovo (1999), Afghanistan (2001-), and Iraq (2oo3-2011) – in addition to many smaller interventions including Bosnia, Haiti, Somalia, and Sudan.5 As a result, the United States has been at war for **fifteen of the twenty-five years** since the end of the Cold War, In fact, the first two-and-a-half decades of unipolarity — representing around 1o percent of U.S. history account for more than 30 percent of the nation's total wartime.6 For critics of U.S. interventionism, "**the central question** [of contemporary international politics] is how to **contain and moderate the use of military force by the** **U**nited **S**tates."8

Table 5 presents a list of great powers divided into three periods: from 1816 to 1945, multipolarity; from 1946 to 1989, bipolarity; and unipolarity since 1990.9 Table 6 then presents summary data about the incidence of war during each of these periods. Unipolarity is by far **the most conflict prone of all systems** according to two important criteria: the percentage of years that great powers spend at war and the incidence of war involving great powers. In multipolarity, 18 percent of great-power years were spent at war versus 16 percent in bipolarity. In unipolarity, in contrast, a remarkable **64 percent** of great-power years have been until now spent at war – by far the **highest** percentage **in all systems**. Furthermore, during multipolarity and bipolarity the probability that war involving a great power would, break out in any given year was, respectively, 4.2 percent and 3.4 percent. Under unipolarity, it is 16.o percent – or around **four times higher**.

It might be argued that the higher number of years that great powers spent at war under unipolarity are merely the result of the long, grinding, and unforeseen occupations of Afghanistan and Iraq by U.S. forces.11 But even if these two wars had gone according to U.S. plans – if the Afghanistan War had ended in the spring of 2002 and the Iraq War in the summer of 2003 – unipolarity would still be particularly **prone to great-power involvement in war**. Even if the United States had not occupied either Afghanistan or Iraq, it would still have spent 16.0 percent of the post-Cold War years at war, which is about the same as the respective percentages for bipolar and multipolar systems. In other words, even if the United States had refrained from any military occupations, the frequency of its use of military force in major operations would still give us **no reason to believe that unipolarity is any more peaceful** than any other past configuration of the international system.

As things turned out in both Afghanistan and Iraq, the last two-and-a-half decades saw a sharp increase in both the incidence of conflict and the percentage of great-power years spent at war. This is a particularly puzzling finding given that the current unipole – the United States – is a democracy in a world populated by more democracies than at any time in the past. In light of arguments about how democracies are better able to solve disputes peacefully, choose to engage only in those wars they can win, and tend to fight shorter wars, the United States should have spent fewer years at war than previous nondemocratic great powers.12

As we can see, post-Cold War history can be used in support of both the widespread claim that the overall level of conflict has declined and of the claim that the United States has experienced an **unprecedented level of involvement in interstate war**. Reality seems to be chafing against the view that unipolarity produces no incentives for conflict; at least in what concerns the unipole's involvement in interstate wars, the past two-and-a-half decades seem to point in the opposite direction.

**2NC/1NR – Unipolarity Bad**

**Heg doesn’t solve stability -- empirical analysis proves it destabilizes the world and multipolar systems aren’t worse.**

**Cambanis 12** [Thanassis - Fellow at The Century Foundation and Professor at Columbia University’s School of International and Public Affairs “The lonely superpower,” http://bostonglobe.com/ideas/2012/01/22/the-lonely-superpower/FRkSf1s5n9lXku4VqvEtqJ/story.html]

Now, however, with a few decades of experience to study, a young international relations theorist at Yale University has proposed a provocative new view: American dominance has destabilized the world in new ways, and the United States is no better off in the wake of the Cold War. In fact, he says, a world with a single superpower and a crowded second tier of distant competitors encourages, rather than discourages, violent conflict--not just among the also-rans, but even involving the single great power itself. In a paper that appeared in the most recent issue of the influential journal International Security, political scientist Nuno P. Monteiro lays out his case. America, he points out, has been at war for 13 of the 22 years since the end of the Cold War, about double the proportion of time it spent at war during the previous two centuries. “I’m trying to debunk the idea that a world with one great power is better,” he said in an interview. “If you don’t have one problem, you have another.” Sure, Monteiro says, the risk of apocalyptic war has decreased, since there’s no military equal to America’s that could engage it in mutually assured destruction. But, he argues, the lethal, expensive wars in the Persian Gulf, the Balkans, and Afghanistan have proved a major drain on the country. Even worse, Monteiro claims, America’s position as a dominant power, unbalanced by any other alpha states actually exacerbates dangerous tensions rather than relieving them. Prickly states that Monteiro calls “recalcitrant minor powers” (think Iran, North Korea, and Pakistan), whose interests or regime types clash with the lone superpower, will have an incentive to provoke a conflict. Even if they are likely to lose, the fight may be worth it, since concession will mean defeat as well. This is the logic by which North Korea and Pakistan both acquired nuclear weapons, even during the era of American global dominance, and by which Iraq and Afghanistan preferred to fight rather than surrender to invading Americans. Of course, few Americans long for the old days of an arms race, possible nuclear war, and the threat of Soviet troops and missiles pointed at America and its allies. Fans of unipolarity in the foreign policy world think that the advantages of being the sole superpower far outweigh the drawbacks -- a few regional conflicts and insurgencies are a fair price to pay for eliminating the threat of global war. But Monteiro says that critics exaggerate the distinctions between the wars of today and yesteryear, and many top thinkers in the world of security policy are finding his argument persuasive. If he’s right, it means that the most optimistic version of the post-Cold War era -- a “pax Americana” in which the surviving superpower can genuinely enjoy its ascendancy -- was always illusory. In the short term, a dominant United States should expect an endless slate of violent challenges from weak powers. And in the longer term, it means that Washington shouldn’t worry too much about rising powers like China or Russia or the European Union; America might even be better off with a rival powerful enough to provide a balance. You could call it the curse of plenty: Too much power attracts countless challenges, whereas a world in which power is split among several superstates might just offer a paradoxical stability. From the 1700s until the end of World War II in 1945, an array of superpowers competed for global influence in a multipolar world, including imperial Germany and Japan, Russia, Great Britain, and after a time, the United States. The world was an unstable place, prone to wars minor and major. The Cold War era was far more stable, with only two pretenders to global power. It was, however, an age of anxiety. The threat of nuclear Armageddon hung over the world. Showdowns in Berlin and Cuba brought America and the Soviet Union to the brink, and the threat of nuclear escalation hung over every other superpower crisis. Generations of Americans and Soviets grew up practicing survival drills; for them, the nightmare scenario of thermonuclear winter was frighteningly plausible. It was also an age of violent regional conflicts. Conflagrations in Asia, Africa, and Latin America spiraled into drawn out, lethal wars, with the superpowers investing in local proxies (think of Angola and Nicaragua as well as Korea and Vietnam). On the one hand, superpower involvement often made local conflicts far deadlier and longer than they would have been otherwise. On the other, the balance between the United States and the USSR reduced the likelihood of world war and kept the fighting below the nuclear threshold. By tacit understanding, the two powers had an interest in keeping such conflicts contained. When the Soviet Union began its collapse in 1989, the United States was the last man standing, wielding a level of global dominance that had been unknown before in modern history. Policy makers and thinkers almost universally agreed that dominance would be a good thing, at least for America: It removed the threat of superpower war, and lesser powers would presumably choose to concede to American desires rather than provoke a regional war they were bound to lose. That is what the 1991 Gulf War was about: establishing the new rules of a unipolar world. Saddam Hussein invaded Kuwait, Monteiro believes, because he miscalculated what the United States was willing to accept. After meeting Saddam with overwhelming force, America expected that the rest of the world would capitulate to its demands with much less fuss. Monteiro compared the conflicts of the multipolar 18th century to those of the Cold War and current unipolar moment. What he found is that the unipolar world isn’t necessarily better than what preceded it, either for the United States or for the rest of the world. It might even be worse. “Uncertainty increases in unipolarity,” Monteiro says. “If another great power were around, we wouldn’t be able to get involved in all these wars.” In the unipolar period, a growing class of minor powers has provoked the United States, willing to engage in brinkmanship up to and including violent conflict. Look no further than Iran’s recent threats to close the Strait of Hormuz to oil shipping and to strike the American Navy. Naturally, Iran wouldn’t be able to win such a showdown. But Iran knows well that the United States wants to avoid the significant costs of a war, and might back down in a confrontation, thereby rewarding Iran’s aggressive gambits. And if (or once) Iran crosses the nuclear threshold, it will have an even greater capacity to deter the United States. During the Cold War, on the other hand, regional powers tended to rely on their patron’s nuclear umbrella rather than seeking nukes of their own, and would have had no incentive to defy the United States by developing them. Absent a rival superpower to check its reach, the United States has felt unrestrained, and at times even obligated, to intervene as a global police officer or arbiter of international norms against crimes such as genocide. Time and again in the post-Cold War age, minor countries that were supposed to meekly fall in line with American imperatives instead defied them, drawing America into conflicts in the Balkans, Somalia, Haiti, Iraq, and Afghanistan. This wasn’t what was supposed to happen: The world was supposed to be much safer for a unipolar superpower, not more costly and hazardous.

**2NC/1NR – No Impx to Heg**

**No impact to heg – it’s unsustainable and causes war**

**Mearsheimer 18**

John J, smartest man alive, “The Great Delusion: Liberal Dreams and International Realities”, National Interest, 10/5, <https://nationalinterest.org/feature/great-delusion-liberal-dreams-and-international-realities-32737> DB

Liberal hegemony is an ambitious strategy in which a state aims to turn as many countries as possible into liberal democracies like itself while also promoting an open international economy and building international institutions. In essence, **the liberal state seeks to spread its own values far and wide**. My goal in this book is to describe what happens when a powerful state pursues this strategy at the expense of balance-of-power politics. Many in the West, especially among foreign policy elites, consider liberal hegemony a wise policy that states should axiomatically adopt. Spreading liberal democracy around the world is said to make eminently good sense from both a moral and a strategic perspective. For starters, it is thought to be an excellent way to protect human rights, which are sometimes seriously violated by authoritarian states. And because the policy holds that liberal democracies do not want to go to war with each other, it ultimately provides a formula for transcending realism and fostering international peace. Finally, proponents claim it helps protect liberalism at home by eliminating authoritarian states that otherwise might aid the illiberal forces that are constantly present inside the liberal state. **This conventional wisdom is wrong**. **Great powers are rarely in a position to pursue a full-scale liberal foreign policy**. **As long as two or more of them exist on the planet, they have little choice but to pay close attention to their position in the global balance of power and act according to the dictates of realism**. Great powers of all persuasions care deeply about their survival, and there is always the danger in a bipolar or multipolar system that they will be attacked by another great power. In these circumstances, liberal great powers regularly dress up their hard-nosed behavior with liberal rhetoric. **They talk like liberals and act like realists**. Should they adopt liberal policies that are at odds with realist logic, they invariably come to regret it. But occasionally a liberal democracy encounters such a favorable balance of power that it is able to embrace liberal hegemony. That situation is most likely to arise in a unipolar world, where the single great power does not have to worry about being attacked by another great power since there is none. Then the liberal sole pole will almost always abandon realism and adopt a liberal foreign policy. Liberal states have a crusader mentality hard-wired into them that is hard to restrain. Because liberalism prizes the concept of inalienable or natural rights, committed liberals are deeply concerned about the rights of virtually every individual on the planet. **This universalist logic creates a powerful incentive for liberal states to get involved in the affairs of countries that seriously violate their citizens’ rights**. To take this a step further, the best way to ensure that the rights of foreigners are not trampled is for them to live in a liberal democracy. **This logic leads straight to an active policy of regime change, where the goal is to topple autocrats and put liberal democracies in their place**. Liberals do not shy from this task, mainly because they often have great faith in their state’s ability to do social engineering both at home and abroad. Creating a world populated by liberal democracies is also thought to be a formula for international peace, which would not just eliminate war but greatly reduce, if not eliminate, the twin scourges of nuclear proliferation and terrorism. And lastly, it is an ideal way of protecting liberalism at home. This enthusiasm notwithstanding, **liberal hegemony will not achieve its goals, and its failure will inevitably come with huge costs**. The liberal state is likely to end up fighting endless wars, which will increase rather than reduce the level of conflict in international politics and thus aggravate the problems of proliferation and terrorism. Moreover, the state’s militaristic behavior is almost certain to end up threatening its own liberal values. **Liberalism abroad leads to illiberalism at home**. Finally, **even if the liberal state were to achieve its aims—spreading democracy near and far, fostering economic intercourse, and creating international institutions—they would not produce peace**. The key to understanding liberalism’s limits is to recognize its relationship with nationalism and realism. This book is ultimately all about these three isms and how they interact to affect international politics. Nationalism is an enormously powerful political ideology. It revolves around the division of the world into a wide variety of nations, which are formidable social units, each with a distinct culture. Virtually every nation would prefer to have its own state, although not all can. Still, we live in a world populated almost exclusively by nation-states, which means that liberalism must coexist with nationalism. Liberal states are also nationstates. There is no question that liberalism and nationalism can coexist, but when they clash, nationalism almost always wins. The influence of nationalism often undercuts a liberal foreign policy. For example, **nationalism places great emphasis on self-determination, which means that most countries will resist a liberal great power’s efforts to interfere in their domestic politics—which, of course, is what liberal hegemony is all about**. These two isms also clash over individual rights. Liberals believe everyone has the same rights, regardless of which country they call home. Nationalism is a particularist ideology from top to bottom, which means it does not treat rights as inalienable. In practice, the vast majority of people around the globe do not care greatly about the rights of individuals in other countries. They are much more concerned about their fellow citizens’ rights, and even that commitment has limits. Liberalism oversells the importance of individual rights. **Liberalism is also no match for realism**. At its core, liberalism assumes that the individuals who make up any society sometimes have profound differences about what constitutes the good life, and these differences might lead them to try to kill each other. Thus a state is needed to keep the peace. But **there is no world state to keep countries at bay when they have profound disagreements**. **The structure of the international system is anarchic, not hierarchic, which means that liberalism applied to international politics cannot work**. Countries thus have little choice but to act according to balance-of-power logic if they hope to survive. There are special cases, however, where a country is so secure that it can take a break from realpolitik and pursue truly liberal policies. The results are almost always bad, largely because nationalism thwarts the liberal crusader. My argument, stated briefly, is that nationalism and realism almost always trump liberalism. Our world has been shaped in good part by those two powerful isms, not by liberalism. Consider that five hundred years ago the political universe was remarkably heterogeneous; it included city-states, duchies, empires, principalities, and assorted other political forms. That world has given way to **a globe populated almost exclusively by nation states**. Although many factors caused this great transformation, two of **the main driving forces behind the modern state system were nationalism and balance-of-power politics**. The American Embrace of Liberal Hegemony This book is also motivated by a desire to understand recent American foreign policy. The United States is a deeply liberal country that emerged from the Cold War as by far the most powerful state in the international system. 1 The collapse of the Soviet Union in 1991 left it in an ideal position to pursue liberal hegemony. 2 The American foreign policy establishment em braced that ambitious policy with little hesitation, and with abundant optimism about the future of the United States and the world. At least at first, the broader public shared this enthusiasm. The zeitgeist was captured in Francis Fukuyama’s famous article, “The End of History?,” published just as the Cold War was coming to a close. 3 Liberalism, he argued, defeated fascism in the first half of the twentieth century and communism in the second half, and now there was no viable alternative left standing. The world would eventually be entirely populated by liberal democracies. According to Fukuyama, these nations would have virtually no meaningful disputes, and wars between great powers would cease. The biggest problem confronting people in this new world, he suggested, might be boredom. It was also widely believed at the time that the spread of liberalism would ultimately bring an end to balance-of-power politics. The harsh security competition that has long characterized great-power relations would disappear, and realism, long the dominant intellectual paradigm in international relations, would land on the scrap heap of history. “In a world where freedom, not tyranny, is on the march,” Bill Clinton proclaimed while campaigning for the White House in 1992, “the cynical calculus of pure power politics simply does not compute. It is ill-suited to a new era in which ideas and information are broadcast around the globe before ambassadors can read their cables.” Probably no recent president embraced the mission of spreading liberalism more enthusiastically than George W. Bush, who said in a speech in March 2003, two weeks before the invasion of Iraq: “The current Iraqi regime has shown the power of tyranny to spread discord and violence in the Middle East. A liberated Iraq can show the power of freedom to transform that vital region, by bringing hope and progress into the lives of millions. America’s interests in security, and America’s belief in liberty, both lead in the same direction: to a free and peaceful Iraq.” Later that year, on September 6, he proclaimed: “The advance of freedom is the calling of our time; it is the calling of our country. From the Fourteen Points to the Four Freedoms, to the Speech at Westminster, America has put our power at the service of principle. We believe that liberty is the design of nature; we believe that liberty is the direction of history. We believe that human fulfillment and excellence come in the responsible exercise of liberty. And we believe that freedom—the freedom we prize—is not for us alone, it is the right and the capacity of all mankind.” Something went badly wrong. **Most people’s view of U.S. foreign policy today, in 2018, is starkly different from what it was in 2003, much less the early 1990s**. **Pessimism, not optimism, dominates most assessments of America’s accomplishments during its holiday from realism**. Under Presidents Bush and Barack Obama, Washington has played a key role in sowing death and destruction across the greater Middle East, and there is little evidence the mayhem will end anytime soon. American policy toward Ukraine, motivated by liberal logic, is principally responsible for the ongoing crisis between Russia and the West. The United States has been at war for two out of every three years since 1989, fighting seven different wars. We should not be surprised by this. Contrary to the prevailing wisdom in the West, a **liberal foreign policy is not a formula for cooperation and peace but for instability and conflict**. In this book I focus on the period between 1993 and 2017, when the Clinton, Bush, and Obama administrations, each in control of American foreign policy for eight years, were fully committed to pursuing liberal hegemony. Although President Obama had some reservations about that policy, they mattered little for how his administration actually acted abroad. I do not consider the Trump administration for two reasons. First, as I was finishing this book it was difficult to determine what President **Trump**’s foreign policy would look like, although it is clear from his rhetoric during the 2016 campaign that he **recognizes that liberal hegemony has been an abject failure and would like to abandon key elements of that strategy**. Second, **there is good reason to think that with the rise of China and the resurrection of Russian power having put great power politics back on the table, Trump eventually will have no choice but to move toward a grand strategy based on realism, even if doing so meets with considerable resistance at home**.

**2NC/1NR – Transition Wars**

**Hege is unsustainable and makes Russia/China nuclear war inevitable – allowing limited Russian/Chinese influence checks revisionism without risking transition wars**

**Allison 20**

Graham, Douglas Dillon Professor of Government at the Harvard Kennedy School, “The New Spheres of Influence: Sharing the Globe With Other Great Powers.”, Foreign Affairs, Vol. 99, Iss. 2 DB

COME HOME, AMERICA? In the heady aftermath of the Cold War, American policymakers pronounced one of the fundamental concepts of geopolitics obsolete. Secretary of State Condoleezza Rice described a new world "in which great power is defined not by spheres of influence … or the strong imposing their will on the weak." Secretary of State Hillary Clinton declared that "the United States does not recognize spheres of influence." Secretary of State John Kerry proclaimed that "the era of the Monroe Doctrine is over," ending almost two centuries of the United States staking claim to its own sphere of influence in the Western Hemisphere. Such pronouncements were right in that something about geopolitics had changed. But they were wrong about what exactly it was. U.S. policymakers had ceased to recognize spheres of influence--the ability of other powers to demand deference from other states in their own regions or exert predominant control there--not because the concept had become obsolete. Rather, **the entire world had become a de facto American sphere**. Spheres of influence had given way to a sphere of influence. The strong still imposed their will on the weak; the rest of the world was compelled to play largely by American rules, or else face a steep price, from crippling sanctions to outright regime change. **Spheres of influence hadn't gone away; they had been collapsed into one, by the overwhelming fact of U.S. hegemony**. **Now, however, that hegemony is fading, and Washington has awakened to what it calls "a new era of great-power competition," with China and Russia increasingly using their power to assert interests and values that often conflict with those of the United States**. **But American policymakers and analysts are still struggling to come to grips with what this new era means for the U.S. role in the world**. **Going forward, that role will not only be different; it will also be significantly diminished**. While leaders will continue announcing grand ambitions, diminished means will mean diminished results. **Unipolarity is over, and with it the illusion that other nations would simply take their assigned place in a U.S.-led international order**. **For the United States, that will require accepting the reality that there are spheres of influence in the world today--and that not all of them are American spheres**. THE WORLD AS IT WAS Before making pronouncements about the new rules of geopolitics, post-Cold War U.S. secretaries of state should have looked back to the final months of World War II, when U.S. policymakers were similarly resistant to accepting a world in which spheres of influence remained a central feature of geopolitics. Competing views on the issue lay at the core of a debate between two top Soviet experts in the U.S. government. On February 4, 1945, President Franklin Roosevelt met with Soviet leader Joseph Stalin and British Prime Minister Winston Churchill at Yalta. At Roosevelt's side was his translator and principal adviser on the Soviet Union, Charles Bohlen. Just that morning, Bohlen had opened an urgent private missive from his close colleague George Kennan in Moscow. Kennan correctly forecast that the Soviet Union would attempt to maintain control of as much of Europe as it could. The question was what the United States should do about that. Kennan asked, "Why could we not make a decent and definitive compromise with it--divide Europe frankly into spheres of influence--keep ourselves out of the Russian sphere and keep the Russians out of ours?" Bohlen was appalled. "Utterly impossible," he erupted in response. "Foreign policy of that kind cannot be made in a democracy." Reflecting on this moment later, Bohlen explained: "The American people, who had fought a long, hard war, deserved at least an attempt to work out a better world." Between 1945 and 1947, Bohlen worked alongside other leading figures in the Roosevelt and then the Truman administration to realize their "one world" vision, in which the allies who had fought together to defeat the Nazis would remain allied in creating a new global order. But he ultimately resigned himself to the world as it was--in short, Kennan had been right. "Instead of unity among the great powers on the major issues of world reconstruction--both political and economic--after the war, there is complete disunity between the Soviet Union and the satellites on one side and the rest of the world on the other," Bohlen acknowledged in the summer of 1947 in a memo to Secretary of State George Marshall. "There are, in short, two worlds instead of one." When he finally came to share Kennan's diagnosis, Bohlen did not shrink from the implications. His memo to Marshall concluded: Faced with this disagreeable fact, however much we may deplore it, the United States in the interest of its own well-being and security and those of the free non-Soviet world must … draw [the non-Soviet world] closer together politically, economically, financially, and, in the last analysis, militarily in order to be in a position to deal effectively with the consolidated Soviet area. This conviction became a pillar of the United States' strategy for the coming decades, and it rested on the acceptance of spheres of influence. There would be areas that would be subjected to Soviet domination, with often terrible consequences, but the best course for the United States was to bolster those powers on the periphery of this Soviet sphere while reinforcing the strength and unity of its own sphere. For the four decades that followed, the United States and the Soviet Union engaged in the great-power competition that we know as the Cold War. In the Soviet sphere, the captive nations of Eastern Europe remained under the boot of an "evil empire." American presidents faced repeated crises in which they had to choose between sending troops into Soviet-dominated nations to support freedom fighters seeking to exercise rights that the American creed declares universal and standing by as those freedom fighters were slaughtered or suppressed. Without exception, U.S. presidents chose to watch instead of intervene: consider Dwight Eisenhower when Hungarians rose up in 1956 and Lyndon Johnson during the Prague Spring of 1968 (or, after the Cold War, George W. Bush when Russian troops attacked Georgia in 2008 and Barack Obama when Russian special forces seized Crimea). Why? Each had internalized an unacceptable yet undeniable truth: that, as U.S. President Ronald Reagan once explained in a joint statement with Soviet leader Mikhail Gorbachev, "a nuclear war cannot be won and must never be fought." This bit of Cold War history should serve as a reminder: a nation that is simultaneously idealistic and realistic will always struggle to reconcile rationales and rationalizations of purpose, on the one hand, with realities of power, on the other. The result, in the foreign policy analyst Fareed Zakaria's apt summary, has been "the rhetoric of transformation but the reality of accommodation." Even at the height of U.S. power, accommodation meant accepting the ugly fact of a Soviet sphere of influence. TECTONIC SHIFTS After nearly half a century of competition, when the Cold War ended and the Soviet Union disappeared, in 1991, the United States was left economically, militarily, and geopolitically dominant. In the first two decades of the post-Cold War era, U.S. defense spending exceeded the defense budgets of the next ten nations combined (five of them U.S. treaty allies). Operationally, that meant that, as Secretary of Defense James Mattis's 2018 National Defense Strategy put it, the United States "enjoyed uncontested or dominant superiority in every operating domain. We could generally deploy our forces when we wanted, assemble them where we wanted, and operate how we wanted." The United States and its allies could welcome new members into NATO, applying to them its Article 5 security guarantee, without thinking about the risks, since the alliance faced no real threat. In that world, strategy in essence consisted of overwhelming challenges with resources. But that was then. The tectonic shift in the balance of power that occurred in the first two decades of the twenty-first century was as dramatic as any shift the United States has witnessed over an equivalent period in its 244 years. To paraphrase Vaclav Havel, then the president of Czechoslovakia, it has happened so fast, we have not yet had time to be astonished. The U.S. share of global GDP--nearly one-half in 1950--has gone from one-quarter in 1991 to one-seventh today. (Although GDP is not everything, it does form the substructure of power in relations among nations.) **And as the United States' relative power has declined, the menu of feasible options for policymakers has shrunk**. Consider, for example, the U.S. response to China's Belt and Road Initiative. With currency reserves of almost $3 trillion, China can invest $1.3 trillion in infrastructure linking most of Eurasia to a China-centered order. When Secretary of State Mike Pompeo announced that the United States would increase its own investments in the Indo-Pacific in response, he was able to come up with just $113 million in new investments. China has, of course, been the chief beneficiary of this transformation. In the past generation, its GDP has soared: from 20 percent of the U.S. level in 1991 to 120 percent today (measured by purchasing power parity, the metric that both the CIA and the International Monetary Fund use to compare national economies). Although China faces many internal challenges, there are more reasons to expect this basic economic trend to continue than to bet that it will stop soon. With four times as many citizens as the United States, and if Chinese workers become as productive as Portuguese workers are today (that is, around half as productive as Americans), China will see its GDP rise to double that of the United States. **In Asia, the economic balance of power has tilted especially dramatically in China's favor**. As the world's largest exporter and second-largest importer, China is the top trading partner of every other major East Asian country, including U.S. allies. (And as an aggressive practitioner of economic statecraft, Beijing does not hesitate to use the leverage this provides, squeezing countries such as the Philippines and South Korea when they resist Chinese demands.) **Globally, China is also rapidly becoming a peer competitor of the United States in advanced technologies**. Today, of the 20 largest information technology companies, nine are Chinese. Four years ago, when Google, the global leader in artificial intelligence (AI), the most significant advanced technology, assessed its competition, Chinese companies ranked alongside European companies. Now, that state of affairs is barely visible in the rearview mirror: Chinese companies lead in many areas of applied AI, including surveillance, facial and voice recognition, and financial technology. **China's military spending and capabilities have surged**, as well. A quarter century ago, its defense budget was one-25th that of the United States; now, it is one-third and on a path to parity. And whereas the U.S. defense budget is spread across global commitments, many of them in Europe and the Middle East, China's budget is focused on East Asia. Accordingly, in specific military scenarios involving a conflict over Taiwan or in the South China Sea, China may have already taken the lead. Short of actual war, the best tests of relative military capabilities are war games. In 2019, Robert Work, a former U.S. deputy secretary of defense, and David Ochmanek, one of the Defense Department's key defense planners, offered a public summary of the results from a series of classified recent war games. Their bottom line, in Ochmanek's words: "When we fight Russia and China, 'blue' [the United States] gets its ass handed to it." As The New York Times summarized, "In 18 of the last 18 Pentagon war games involving China in the Taiwan Strait, the U.S. lost." Russia is a different matter. Whatever President Vladimir Putin might want, Russia will never again be his father's Soviet Union. When the Soviet Union dissolved, the resulting Russian state was left with less than half the GDP and half the population and saw its borders rolled back to the days before Catherine the Great. **Yet Russia remains a nuclear superpower with an arsenal that is functionally equivalent to that of the United States; it has a defense industry that produces weapons the world is eager to buy (as India and Turkey have demonstrated in the past year); and it boasts military forces that can fight and win--as they have demonstrated repeatedly in Chechnya, Georgia, Ukraine, and Syria**. On a continent where most of the other nations imagine that war has become obsolete, and maintain military forces more for ceremonial than combat operations, military prowess may now be Russia's major comparative advantage. BACK TO BASICS **The claim that spheres of influence had been consigned to the dustbin of history assumed that other nations would simply take their assigned places in a U.S.-led order**. **In retrospect, that assumption seems worse than naive**. Yet because many U.S. analysts and policymakers still cling to images of China and Russia formed during this bygone era, their views about what the United States should and should not do continues to reflect a world that has vanished. Over the course of centuries of geopolitical competition, policymakers and theorists developed a set of core concepts to help clarify the complexities of relations among states, including spheres of influence, balances of power, and alliances. These concepts must be adapted to take account of specific conditions in the twenty-first century. Yet they remain the sturdiest building blocks available for understanding and constructing international order. Where the equilibrium of forces between one state and another shifts to the point where the first becomes predominant, the resulting new balance of power casts a shadow that becomes, in effect, a "sphere of influence." That specific term entered the vocabulary of diplomacy in the early nineteenth century, but the concept is as old as international relations itself. (As Thucydides noted, after the defeat of the Persians in the fifth century BC, Sparta demanded that Athens not rebuild the walls around its city-state to leave itself vulnerable.) Traditionally, great powers have demanded a degree of deference from lesser powers on their borders and in adjacent seas, and they have expected other great powers to respect that fact. Recent actions by China and Russia in their respective neighborhoods are just the most recent examples of that tradition. Spheres of influence also extend beyond geography. When the United States led the world in the creation of the Internet, and the hardware and software that empowered it, the United States enjoyed what Michael Hayden, a former director of the National Security Agency, later called a "golden age of electronic surveillance." Since most countries were unaware of the surveillance capabilities revealed by the former NSA contractor Edward Snowden, the United States had an unparalleled ability to exploit technology to listen to, track, and even influence them. But post-Snowden, many states are resisting the current U.S. campaign to prevent them from buying their 5G wireless infrastructure from the Chinese telecommunications giant Huawei. As the leader of a country currently considering the choice recently put it, Washington is trying to persuade other countries not to buy Chinese hardware because it will make it easier for China to spy and instead to buy American hardware, which would make it easier for the United States to spy. A REALISTIC RECKONING **From the perspective of American interests and values, the consequences of increases in China's and Russia's power relative to that of the United States are not good**. As great powers, China and Russia can use their power to suppress protesters' freedom in Hong Kong or block Ukrainian membership in NATO. The South China Sea is likely to become more like the Caribbean than the Mediterranean--that is, China's neighbors in Southeast Asia will be as beholden to China as Latin Americans have been to their hemispheric hegemon. Ukraine will have to get over the loss of Crimea as countries in Russia's "near abroad" learn to be both more fearful of and more deferential to the Kremlin. For many other nations and individuals around the world who have found shelter under the American security umbrella and found inspiration in a vision of an American-led international order that safeguards core liberties, the consequences will be tragic. Recent events in Syria offer a preview of what's to come. As the Arab Spring erupted in late 2010 and 2011, Obama famously declared that Syrian leader Bashar al-Assad "must go." But Putin had other ideas, and he was willing to act on them. He demonstrated that a nation Obama had dismissed as a "regional power" could use its military forces to defy the United States and help the Syrian leader consolidate his control. This has been a horror for Syrians, and the millions of displaced people have had a major impact on neighboring countries and Europe. But did Obama, or, later, President Donald Trump, conclude that this outcome was so costly that it would be better to send large numbers of U.S. troops to fight and perhaps die in Syria? Can Americans sleep soundly in a world in which Putin and Assad now smile when they ask visitors who is gone and who is still standing? U.S. inaction speaks for itself. Sadly, Americans will come to accept such outcomes as good enough--at least for the foreseeable future. Like Assad's atrocities, Russia's absorption of Crimea and China's militarization of the South China Sea are now facts on the ground that no one will contest militarily. **Acknowledging that other powers have spheres of influence does not, of course, mean that the United States can do nothing**. It is a reflection of the recent overmilitarization of U.S. foreign policy that restraint in the use of military force is often equated with acquiescence. Washington has other ways in which it can shape other countries' calculations of costs and benefits: through the condemnation of unacceptable actions; the denial of legal status; the imposition of economic sanctions on countries, companies, and individuals; and support for local resisters. But such tools can rarely decisively alter a decision another power has made when interests it sees as vital are at stake. And it is worth remembering how often a refusal to recognize and accept realities on the ground in the shadow of other powers has led to major U.S. policy failures. From General Douglas MacArthur's rush to the Chinese border during the Korean War (which triggered Chinese intervention and a bloody, inconclusive war) to George W. Bush's insistence that NATO offer membership to Georgia and Ukraine (which led to Georgian overconfidence, ending in the country's partial dismemberment by Russia), a stubborn disregard of brute facts has been counterproductive. THE MUSEUM OF RETIRED INTERESTS When it comes to doing what it can, Washington should focus above all on its alliances and partnerships. If China is destined to be "the biggest player in the history of the world," as the longtime Singaporean leader Lee Kuan Yew once claimed, the United States must work to assemble allied powers who together will constitute a correlation of forces to which China will have to adjust. This logic is most evident in the economic arena. Before the Trump administration ended U.S. participation in the Trans-Pacific Partnership, that trade agreement promised to bring together countries accounting for 40 percent of global GDP under a common set of rules on everything from tariffs to state-owned enterprises to labor and environmental standards--providing a counterweight to Chinese economic might that could have made Beijing a rule-taker rather than a rule-maker. Thanks to the efforts of Japanese Prime Minister Shinzo Abe, the TPP is now a reality--but without the United States. If American policymakers could find a way to allow strategic interests to trump politics, the United States could rejoin the TPP. If that new TPP were combined with the parallel trade agreement between the United States and the European Union that was being negotiated at the end of the Obama administration, nearly 70 percent of the world's GDP could be on one side of the balance, versus China's approximately 20 percent on the other. In the military arena, the same logic applies, but with more complexity. Washington will need partners--but partners that bring more in assets than they introduce in risks. Unfortunately, few of the United States' current allies meet this standard. The U.S. alliance system should be subjected to a zero-based analysis: every current ally and partner, from Pakistan, the Philippines, and Thailand to Latvia, Saudi Arabia, and Turkey, should be considered in terms of what it is doing to enhance U.S. security and well-being, and with what risks and costs. Alliances are not forever. Historically, when conditions have changed, particularly when a focal enemy has disappeared or balances of power have shifted dramatically, so, too, have other relationships among nations. Most Americans today have forgotten an era in which NATO had a counterpart in Asia, SEATO (the Southeast Asia Treaty Organization), and even an analogue in the Middle East, CENTO (the Central Treaty Organization); both of those are now artifacts in the museum of retired national interests. As Kennan noted, "There is more respect to be won … by a resolute and courageous liquidation of unsound positions than by the most stubborn pursuit of extravagant or unpromising objectives." To understand the risks entailed in the inheritance of current U.S. alliances, consider two scenarios U.S. defense planners worry about today. If, watching China's suppression of protests in Hong Kong, Taiwan should make a dramatic move toward independence that leads China to react violently, would the United States go to war with China to preserve Taiwan's status? Should it? On the European front, if in response to an uprising of ethnic Russian workers in Riga's shipyards, the Latvian government cracked down on ethnic Russians and sparked Russia's annexation of a swath of Latvia--Crimea 2.0--would NATO launch an immediate military response, in accordance with its Article 5 guarantee? Should it? If the answer to any of those questions is not a straightforward yes--and it is not--then the time has come for an alliance-focused version of the stress tests for banks used after the 2008 financial crisis. **Such an approach is all the more important given the realities of nuclear weapons in this new world**. **Both China and Russia have reliable second-strike nuclear capabilities--that is, the ability to withstand an initial nuclear attack and conduct a retaliatory strike that could destroy the United States**. Accordingly, not only is nuclear war not a viable option; even a **conventional war that could escalate to nuclear war risks catastrophe**. Competition must thus be tempered by caution, constraints, and careful calculations in risk taking. **For a nation that has accumulated a long list of entanglements with nations that may have, or may imagine they have, a blank check from Washington, this creates a big problem**. **The line between reassuring an ally and emboldening its leadership to act recklessly is a fine one**. **If the balance of military power in a conventional war over Taiwan or the Baltics has shifted decisively in China's and Russia's favor, current U.S. commitments are not sustainable**. **The gap between those commitments and the United States' actual military capabilities is a classic case of overstretch**. What a zero-based assessment would mean for the current alliance system, and for U.S. relations with each of more than 50 treaty allies and partners, should emerge as a result of an analysis of the evidence. But it would likely lead the United States to **shed some allies**, **double down on others** whose assets are as important for U.S. security as U.S. assets are for them, and radically revise the terms of each commitment to make obligations and restraints as prominent as reassurances and guarantees. This process would also enhance the credibility of the commitments that the United States chose to renew. While the veterans of the Cold War rightly claim that NATO has been the greatest alliance in the history of the world, neither Trump nor Obama before him was convinced. Tellingly, American military commanders doubted that the North Atlantic Council would authorize a military response to the Russian annexation of Crimea or that the U.S. government would be able to make a decision about how to respond before the event was over. **Rethinking the United States' commitments to its allies would enhance American security and make these same pacts stronger**. PRESENT AT THE (RE-)CREATION Strategy is the purposeful alignment of means and ends. Among the many ways in which a strategy fails, the two most common are mismatch--when the means an actor can organize and sustain are insufficient to achieve the stated ends--and vision blindness, when an actor is mesmerized by an ideal but unachievable end. The United States' twenty-first-century wars in the Middle East offer vivid examples of both. **Going forward, U.S. policymakers will have to abandon unattainable aspirations for the worlds they dreamed of and accept the fact that spheres of influence will remain a central feature of geopolitics**. That acceptance will inevitably be a protracted, confusing, and wrenching process. Yet it could also bring a wave of strategic creativity--an opportunity for nothing less than a fundamental rethinking of the conceptual arsenal of U.S. national security. The basic view of the United States' role in the world held by most of today's foreign-policy makers was imprinted in the quarter century that followed the U.S. victory in the Cold War. That world is now gone. The consequences are as profound as those that Americans confronted in the late 1940s. Accordingly, it is worth remembering how long it took individuals now revered as "wise men" to understand the world they faced. Nearly five years passed between Kennan's "Long Telegram," an early warning of Cold War competition, and the policy paper NSC-68, which finally laid out a comprehensive strategy. The confusion that reigns in the U.S. foreign policy community today should thus not be a cause for alarm. If it took the great strategists of the Cold War nearly five years to forge a basic approach, it would be beyond hubris to expect this generation to do better.

**Case – U.S. – China Coop**

**1NC vs US – China Coop**

**Too many alt causes too coop**

* Multiple reasons = divergence on core issues Biden’s antognistic approach preferring confrontation rather than cooperation

**Haenle & Bresnick 2/21**/2022

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Fifty years ago this week, former U.S. President Richard Nixon flew to China, setting the stage for a dramatic shift in relations between the two countries. Much has changed since that visit, not always for the better. Despite a flurry of diplomatic activity over the past year, **U.S.-China ties remain tense**. Discussions in Alaska and Tianjin yielded few, if any, breakthroughs. While friendlier in tone, the recent summit between Chinese President Xi Jinping and U.S. President Joe Biden led only to agreements to hold yet more talks, albeit on important issues such as strategic stability. The lone bilateral bright spot has been some cooperation on climate.

Since the summit, the Biden administration announced its diplomatic boycott of the Beijing Olympics and added more Chinese companies to its trade restriction list while Congress passed a bill aimed at countering China’s forced labor abuses in Xinjiang. The two sides’ antagonistic stances on issues related to **security**, economics, **tech**nology, **and ideology have largely crystalized**, leaving little space for the adjustments that could relieve simmering tensions. Below, Paul Haenle and Sam Bresnick analyze how the two countries got here and how they can move forward.

WHY ARE THE TWO SIDES STUCK?

Former U.S. President Donald Trump ushered in a more confrontational era in U.S.-China relations, and Biden has largely maintained his predecessor’s approach to Beijing, albeit with a more equanimous tone and embrace of multilateralism. The U.S. government has for decades been concerned by China’s mercantilism, rapid military modernization, and illiberal approach to human rights, but it had held out hope that China might liberalize through increasingly robust contact with the rest of the world. That has not happened, and the United States and others have lost patience with China’s state capitalist system, militarization of the South China Sea, and increasingly authoritarian governance.

But **Beijing is not backing down**. Despite facing pronounced international pushback during the pandemic, Xi has become even more confident in China’s economic system, governance model, and approach to international affairs. “**Time and momentum are on China’s side**,” he argued last year at a high-level meeting, though many analysts accuse the party of overconfidence. At the same time, Chinese officials are increasingly looking askance at their U.S. counterparts. Many appear to believe that the United States, though still a formidable power, is in the early stages of an inevitable decline. Just as China resumes its rightful place atop the hierarchy of Asian nations, Beijing’s thinking goes, the United States’ unresolved racial justice issues, income inequality, and political polarization will catalyze an irreversible diminution of U.S. power in Asia and across the globe.

**Or – SQ solves AND collaboration is high**

**Andrews 3/16**/2022

Edmund L. Andrews is a economics reporter for The New York Times, “China and the United States: Unlikely Partners in AI”, <https://hai.stanford.edu/news/china-and-united-states-unlikely-partners-ai> -- ECM

Despite both rivalry and rising tensions between the United States and China, the two nations have become **the world’s leading collaborators in research on** **A**rtificial **I**ntelligence.

The newly released AI Index Report, **which tracks AI trends** on a host of fronts and is published by the Stanford Institute for Human-Centered Artificial Intelligence, **finds that U.S. and Chinese AI researchers teamed up on far more published articles than collaborators between any other two nations**.

Overall, U.S.-China collaborations on AI research **have quintupled since 2010** and totaled 9,660 papers in 2021—much faster than the increase in collaborations between any other two nations. Collaborations between the United States and United Kingdom, the second most prolific source of cross-border research, increased almost threefold to 3,560 papers.

**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

**2NC/1NR – Collab increasing now**

**Collab on AI is *INCREASING* despite geopolitical friction.**

**Andrews 3/16**/2022

Edmund L. Andrews is a economics reporter for The New York Times, “China and the United States: Unlikely Partners in AI”, <https://hai.stanford.edu/news/china-and-united-states-unlikely-partners-ai> -- ECM

The startling trend highlights a paradox. Even as China and the U.S. race for leadership in what they view as a strategically important technology, **researchers on both sides appear to see benefits in** sharing expertise and **working together**.

“What’s clear is that the amount of collaboration between the **U**nited **S**tates **and China has gone up** dramatically, and it has gone up much more than collaborations between any two other countries,” says Raymond Perrault, Distinguished Computer Scientist at SRI International in Menlo Park and co-chair of the AI Index Steering Committee.

To some extent, the surge in U.S.-China research simply reflects the fact that both nations have poured vast resources into artificial intelligence and produce huge amounts of research. On top of that, many Chinese researchers were trained in the United States and retain close professional ties to their American colleagues.

But the practice is consistent with patterns observed during previous technological revolutions in textiles, steel, and chemical engineering. Research by Jeffrey Ding, a postdoctoral fellow at Stanford HAI, has shown that the full economic impact of historic tech advances stemmed less from which nation pioneered a technology than from which ones were best at applying it across a broad range of industries. That dispersion of technology requires sharing information across industries as well as borders, much as the United States catapulted applied British advances in steel machinery to develop manufacturing approaches that catapulted it to economic dominance.

That said, **the collaboration in AI** comes at a time of growing friction between the United States and China over trade, human rights, and strategic power in the Pacific Rim. Former President Donald Trump villainized China over its trade practices, and President Joe Biden imposed a diplomatic boycott of the Beijing Olympics over China's human rights abuses.

**2NC/1NR – Alt Causes**

**Human rights thump**

**East-West Center.Org**

“US-CHINA RELATIONS: IS THERE A WAY OUT OF THE ABYSS?”, <https://www.eastwestcenter.org/news-center/east-west-wire/us-china-relations-there-way-out-the-abyss> --ECM

Mingjiang Li, **an associate professor and provost’s chair in international relations at Nanyang** Technological University in Singapore, said that US-China relations are at a “**very crucial moment**,” and many **analysts worry that the relationship could** “**slip into a new Cold War**.”

Li suggested, however, that the US could smooth tensions by focusing less attention on human rights issues that China says are internal matters. “Too much US intervention in China's domestic politics may actually not be helpful in changing China politically,” he said.

But America’s concerns about China’s human rights abuses **are not likely to go away**, according to Rick Waters, US deputy assistant secretary of state for China, Taiwan and Mongolia. In addition, he said, “The challenge of managing this relationship is complicated immensely by the increased aggressiveness of Chinese foreign and external policies. We face a competitor potentially capable of combining economic, diplomatic, military and technological power to mount a type of sustained challenge that we have not seen in the international system.”

**2NC/1NR – No AI impx**

**AI impact is fake**

**Miller 17**

Ron, “Artificial intelligence is not as smart as you (or Elon Musk) think”, TechCrunch, 7/25, <https://techcrunch.com/2017/07/25/artificial-intelligence-is-not-as-smart-as-you-or-elon-musk-think/> DB

In March 2016, DeepMind’s AlphaGo beat Lee Sedol, who at the time was the best human Go player in the world. It represented one of those defining technological moments like IBM’s Deep Blue beating chess champion Garry Kasparov, or even IBM Watson beating the world’s greatest Jeopardy! champions in 2011. Yet **these victories, as mind-blowing as they seemed to be, were more about training algorithms and using brute-force computational strength than any real intelligence**. Former MIT robotics professor Rodney Brooks, who was one of the founders of iRobot and later Rethink Robotics, reminded us at the TechCrunch Robotics Session at MIT last week that **training an algorithm to play a difficult strategy game isn’t intelligence, at least as we think about it with humans**. He explained that as strong as AlphaGo was at its given task, it actually couldn’t do anything else but play Go on a standard 19 x 19 board. He relayed a story that while speaking to the DeepMind team in London recently, he asked them what would have happened if they had changed the size of the board to 29 x 29, and the AlphaGo team admitted to him that had there been even a slight change to the size of the board, “we would have been dead.” “I think people see how well [an algorithm] performs at one task and they think it can do all the things around that, and it can’t,” Brooks explained. Brute-force intelligence As Kasparov pointed out in an interview with Devin Coldewey at TechCrunch Disrupt in May, it’s one thing to design a computer to play chess at Grand Master level, but it’s another to call it intelligence in the pure sense. **It’s simply throwing computer power at a problem and letting a machine do what it does best**. “**In chess, machines dominate the game because of the brute force of calculation and they [could] crunch chess once the databases got big enough and hardware got fast enough and algorithms got smart enough, but there are still many things that humans understand**. **Machines don’t have understanding**. **They don’t recognize strategical patterns**. **Machines don’t have purpose**,” Kasparov explained. Gil Pratt, CEO at the Toyota Institute, a group inside Toyota working on artificial intelligence projects including household robots and autonomous cars, was interviewed at the TechCrunch Robotics Session, said that the fear we are hearing about from a wide range of people, including Elon Musk, who most recently called AI “an existential threat to humanity,” could stem from science-fiction dystopian descriptions of artificial intelligence run amok. “The deep learning systems we have, which is what sort of spurred all this stuff, are remarkable in how well we do given the particular tasks that we give them, but they are actually quite narrow and brittle in their scope. So I think it’s important to keep in context how good these systems are, and actually how bad they are too, and how long we have to go until these systems actually pose that kind of a threat [that Elon Musk and others talk about].” Brooks said in his TechCrunch Sessions: **Robotics talk that there is a tendency for us to assume that if the algorithm can do x, it must be as smart as humans**. “**Here’s the reason that people — including Elon — make this mistake**. When we see a person performing a task very well, we understand the competence [involved]. And I think they apply the same model to machine learning,” he said. Facebook’s Mark Zuckerberg also criticized Musk’s comments, calling them “pretty irresponsible,” in a Facebook Live broadcast on Sunday. Zuckerberg believes AI will ultimately improve our lives. Musk shot back later that Zuckerberg had a “limited understanding” of AI. (And on and on it goes.) It’s worth noting, however, that Musk isn’t alone in this thinking. Physicist Stephen Hawking and philosopher Nick **Bostrom** also have expressed reservations about the potential impact of AI on humankind — but chances are they are talking about a more generalized artificial intelligence being studied in labs at the likes of Facebook AI Research, DeepMind and Maluuba, rather than the more narrow AI we are seeing today. Brooks pointed out that **many of these detractors don’t actually work in AI, and suggested they don’t understand just how difficult it is to solve each problem**. “There are quite a few people out there who say that AI is an existential threat — Stephen Hawking, [Martin Rees], the Astronomer Royal of Great Britain…a few other people — and **they share a common thread in that they don’t work in AI themselves**.” Brooks went onto say, “**For those of us who do work in AI, we understand how hard it is to get anything to actually work through product level**.” AI could be a misnomer Part of the problem stems from the fact that we are calling it “artificial intelligence.” **It is not really like human intelligence at all**, which Merriam Webster defines as “the ability to learn or understand or to deal with new or trying situations.” Pascal Kaufmann, founder at Starmind, a startup that wants to help companies use collective human intelligence to find solutions to business problems, has been studying neuroscience for the past 15 years. He says the human brain and the computer operate differently and **it’s a mistake to compare the two**. “The analogy that the brain is like a computer is a dangerous one, and blocks the progress of AI,” he says. Further, Kaufmann believes we won’t advance our understanding of human intelligence if we think of it in technological terms. “It is a misconception that [algorithms] works like a human brain. People fall in love with algorithms and think that you can describe the brain with algorithms and I think that’s wrong,” he said. When things go wrong **There are in fact many cases of AI algorithms not being quite as smart as we might think**. One infamous example of AI out of control was the **Microsoft Tay chatbot**, created by the Microsoft AI team last year. **It took less than a day for the bot to learn to be racist**. Experts say that it could happen to any AI system when bad examples are presented to it. In the case of Tay, it was manipulated by racist and other offensive language, and since it had been taught to “learn” and mirror that behavior, it soon ran out of the researchers’ control. A widely reported study conducted by researchers at Cornell University and the University of Wyoming found that **it was fairly easy to fool algorithms that had been trained to identify pictures**. The researchers found that when presented with what looked like “scrambled nonsense” to humans, algorithms would identify it as an everyday object like “a school bus.” What’s not well understood, according to an MIT Tech Review article on the same research project, is why the algorithm can be fooled in the way the researchers found. What we know is that humans have learned to recognize whether something is a picture or nonsense, and **algorithms analyzing pixels can apparently be subject to some manipulation**. Self-driving cars are even more complicated because there are things that humans understand when approaching certain situations that would be difficult to teach to a machine. In a long blog post on autonomous cars that Rodney Brooks wrote in January, he brings up a number of such situations, including how an autonomous car might approach a stop sign at a cross walk in a city neighborhood with an adult and child standing at the corner chatting. The algorithm would probably be tuned to wait for the pedestrians to cross, but what if they had no intention of crossing because they were waiting for a school bus? A human driver could signal to the pedestrians to go, and they in turn could wave the car on, but a driverless car could potentially be stuck there endlessly waiting for the pair to cross because they have no understanding of these uniquely human signals, he wrote. **Each of these examples show just how far we have to go with artificial intelligence algorithms**. Should researchers ever become more successful at developing generalized AI, this could change, but for now **there are things that humans can do easily that are much more difficult to teach an algorithm, precisely because we are not limited in our learning to a set of defined tasks**.