## 1NC – Case Turns

### ICBMs Good

#### ICBMs are key to assurance and deterrence---turns case.

Heather Williams 17. Lecturer, King’s College London. “Debate: Modernization of Nuclear Missiles.” CSIS. 5/23/2017. https://www.csis.org/events/debate-modernization-nuclear-missiles.

**GBSD – Ground Based Strategic Deterrent**

Heather Williams: [00:25:42] Great. Well I also really want to thank Rebecca Poni and PowerShares and also my CO panelists for this opportunity. I will be arguing that current plans for a new ICBM and cruise missile are not excessive. Indeed these plans are necessary given the changing security environment. But in making this argument I'm coming at this from a bit of a different perspective than my CO panelists. This is based on my seven years of living in Europe and I really want to emphasize that current modern modernization plans are essential for assuring America's allies. At a time when our credibility is increasingly in doubt look before doing that let's just start by talking about and looking at some strategic trends we see other countries are building up their nuclear capabilities and clearly including dual capable cruise missiles and improving anti access area denial A2AD. And as General Kehler pointed out the strategic environment is cross domain its increasingly complex subject to strategic surprise as we have seen in recent years. So amidst all of these trends we have to ask a really basic question that is actually the root of this debate and why we're here and that is would modernization cuts be in America's national interest would American allies be safer without LRSO and GBSD. So given this increasingly uncertain strategic environment and our adversaries improving capabilities nuclear modernization plans are necessary to provide flexibility and to complicate our adversaries decision making. The LRSO is part of that air breathing leg of the triad brings many benefits in terms of stability. It demonstrates resolve to allies into adversaries of America's commitment which I'll talk about in more detail. It's the most flexible leg of the triad. It allows decision makers to tailor deterrence and assurance as the situation requires particularly LRSO so has a unique capability to avoid a A2AD but also these modernization plans. They will frustrate our adversaries. John Wolfsthal himself acknowledge this. In a recent piece in The Bulletin of Atomic Scientists think GBSD you would greatly complicate Russian and Chinese war planning. They inject cost on our adversaries and doubt into decision making as to the likelihood of success. So a credible deterrent requires continuing with these current modernization plans but at the same time as other countries are increasing their capabilities in this area our adversaries are increasingly distrustful of America's commitment to their security. The roots of this distrust are diverse ranging from Obama's Prague speech to some inconsistent signals about the alliance that are coming from the current administration and to many allies that I interact with, further pursuit of the Prague agenda is not in their interest. So canceling these programs would send a strong signal to our already anxious allies that the United States is wavering in its commitment to their assurance. As someone living in an allied country I really do want to emphasize this point because I fear that people in Washington do not understand the seriousness of the decline in America's credibility abroad in the past year. Any significant changes to these programs is just going to contribute to that trend. LRSO so allows us to provide visible assurance GBSD ensures the continuation of a nuclear triad. If either of these capabilities are taken away how would the other two legs of the triad fill that assurance gap and assure our allies. I remain unconvinced that there is a credible alternative. Finally any unilateral cuts to America's current plans for nuclear modernization will not contribute to nuclear disarmament and actually could undermine further arms control efforts. I see no evidence that reductions by the United States and its allies have inspired others to reduce their nuclear arsenals. And research supports this. I would point to a 2016 study by Matt Kroneig in the Journal of peace research which found no support for the idea that reductions in the U.S. arsenal would prompt others to disarm or that a large U.S. arsenal somehow undermines our non-proliferation goals. The United States has reduced its own arsenal by two thirds since the end of the Cold War, but this hasn't prompted any disarmament cascade. Rather we see North Korea, China, Russia building up their own arsenals. So if the objective is to compel states to reduce their arsenals and for more arms control, history shows this happens reciprocally without LRSO so in GBSD the United States would have significantly less leverage in arms control particularly with Russia if we hope to incorporate cruise missiles. So canceling these programs would not contribute to the security of America and its allies nor would it contribute to disarmament arms control. Canceling these programs would actually be to the benefit of our adversaries. And it would be a sign as America's waning commitment to its allies. So as long as assuring allies remains a priority for the United States and for national security, canceling these programs would be a mistake. Thank you.

### PGS Shift Bad

#### PGS shift causes space weaponization---undermines stability AND, renders PGS ineffective.

Nayef Al-Rodhan 18. Honorary Fellow of St. Antony's College at Oxford University; Senior Fellow and Head of the Geopolitics and Global Futures Programme at the Geneva Centre for Security Policy. “Weaponization and Outer Space Security.” Global Policy. 3/12/2018. https://www.globalpolicyjournal.com/blog/12/03/2018/weaponization-and-outer-space-security.

Space weaponization is not a new phenomenon. However, a large number of technological developments over the past few decades have led to a drastic acceleration in the destructive potential of space warfare. In 2016, the Russian Deputy Foreign Minister Sergey Ryabkov voiced his concerns about the possibility of weapons being deployed in space. His statement followed advancements in technological endeavours such as the Prompt Global Strike program, a project within which the United States started developing hypersonic glide vehicles in secret in the mid-2000s.¶ Such hypersonic glide vehicles are different from conventional ballistic missiles in three ways. First, they have a longer range, and can travel over more than half of the Earth circumference. Second, they can approach their target from a direction opposite to the expected trajectory of a typical ballistic missile, and do so on a low altitude gliding trajectory within the atmosphere. Third, they can be extremely precise, with terminal guidance systems enabling them to strike with an accuracy of a few meters. These characteristics make such vehicles nearly impossible to detect. Though it will take many more years and billions more dollars to complete the project, upon completion such missiles could effectively decimate a country’s nuclear and military arsenals in a few tens of minutes, using low-yield nuclear weapons or even conventional explosives. During the Cold War, Russia and the US avoided serious nuclear escalations because the involved weapons on both sides could inflict severe damage on the entire world. However, the precision of hypersonic weapons eradicates this deterrent. Russia has already responded by creating the Aerospace Defence Forces in 2015, tasked with protecting the country against the Prompt Global Strike.¶ As other countries start to consider the US’s weaponization programmes threatening – the US military space budget is estimated at $25 billion and possibly even at more than $40billion – they are taking steps to defend themselves. Hypersonic missiles rely on satellites to function properly and for this reason both Russia and China are increasingly developing the capacity to destroy US satellites. Destroying a satellite could render the US military both blind and deaf, subsequently obscuring the precise targeting capabilities of hypersonic missiles for moving targets, which require a steady stream of data.

#### Space weaponization causes extinction—even without nuclear weapons.

Dr. Gordon Mitchell 01. Associate Professor of Communication and Director of Debate at the University of Pittsburgh. “Missile Defence: Trans-Atlantic Diplomacy at a Crossroads.” ISIS Briefing on Ballistic Missile Defence. http://www.isisuk.demon.co.uk/0811/isis/uk/bmd/no6.html

The dizzying speed of space warfare would introduce intense 'use or lose' pressure into strategic calculations, with the spectre of split-second attacks creating incentives to rig orbiting Death Stars with automated 'hair trigger' devices. In theory, this automation would enhance survivability of vulnerable space weapon platforms. However, by taking the decision to commit violence out of human hands and endowing computers with authority to make war, military planners could sow insidious seeds of accidental conflict. Yale sociologist Charles Perrow has analyzed 'complexly interactive, tightly coupled' industrial systems such as space weapons, which have many sophisticated components that all depend on each other's flawless performance. According to Perrow, this interlocking complexity makes it impossible to foresee all the different ways such systems could fail. As Perrow explains, '[t]he odd term "normal accident" is meant to signal that, given the system characteristics, multiple and unexpected interactions of failures are inevitable'.36 Deployment of space weapons with pre-delegated authority to fire death rays or unleash killer projectiles would likely make war itself inevitable, given the susceptibility of such systems to 'normal accidents'. It is chilling to contemplate the possible effects of a space war. According to retired Lt. Col. Robert M. Bowman, 'even a tiny projectile reentering from space strikes the earth with such high velocity that it can do enormous damage — even more than would be done by a nuclear weapon of the same size!'. 37 In the same Star Wars technology touted as a quintessential tool of peace, defence analyst David Langford sees one of the most destabilizing offensive weapons ever conceived: 'One imagines dead cities of microwave-grilled people'.38 Given this unique potential for destruction, it is not hard to imagine that any nation subjected to space weapon attack would retaliate with maximum force, including use of nuclear, biological, and/or chemical weapons. An accidental war sparked by a computer glitch in space could plunge the world into the most destructive military conflict ever seen.

**PGS triggers global instability. They cause accidents, arms races, etc.**

**Wavell Room, 12/5** – Peer reviewed British National Security Non-Profit. (Hypersonic Weapons: A Threat to Stability, 2018, <https://wavellroom.com/2018/12/05/will-new-and-emerging-hypersonic-weapons-increase-or-decrease-relative-stability-and-security-between-states-and-alliances/?utm_content=bufferce48f&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer>)

‘A particular urgency attaches to defence at this very moment, for **the weapons are now being tested may determine America’s ability to survive**.’ William Borden’s words from 1946 that reflect his thoughts and concerns about the V2 would sit comfortably inside the pages of the latest US National Defence Strategy which also links technological advances as threats to prevailing security threats. Borden believed the V2 would quicken the tempo of war and magnify the advantage of the attacker over the defender.2Forty years earlier, in a fictional look into the future, H.G. Wells’ ‘War in the Air’described how America’s North Sea Fleet was attacked and destroyed in short order by German airships which bore down on a nation that was ‘unwarned and unprepared’.3Technology can be seductive, especially to those who believe in quick victories and winnable wars and the lure of hypersonic weapons may well prove to be irresistible to those who believe in and seek that particular ‘silver bullet’. This paper will argue that although there is a compelling technological case for suggesting that hypersonic weapons will affect the existing stability between states and alliances, **they will fail** to do. As seductive as it is, Freedman points out, technology’s influence on warfare has invariably been shaped by the political context at the time.4We must also be mindful of man’s ability to adapt and innovate when faced by any threat, be that asymmetric methods or using technology of their own. Hypersonic weapons are already taking their place on a noteworthy and lengthy list of weapons that promised to revolutionise warfare; it is a list that already includes Wells’ airships and the V2. Since the Second World War, the security and stability of states and alliances have operated against a backdrop of nuclear deterrence, but this has not prevented proxy wars from taking place at either the state or sub-state level. Initiatives such as America’s Conventional Prompt Global Strike (CPGS) are not new but have been given a new lease of life by hypersonic weapons. Before examining the prevailing factors that are likely to limit their impact, this paper will consider two types of hypersonic weapons: glide vehicles (HGV) and cruise missiles (HCM) which have different capabilities, but both have the potential to impact on the relative security between states.5 Hypersonic speeds have been a reality for several decades through intercontinental ballistic missiles (ICBMs) and experimental aircraft such as the X-15.6Hypersonic weapons are at the very top of the technological food chain and even though the current technology readiness level is 6, meaning prototype demonstration, progress is expected to be rapid.7The generation of hypersonic weapons under development reach speeds in excess of Mach 5 and travel at altitudes between 10 and 100km. Their speed and manoeuvrability, which threaten to make existing anti-missile defences at best ineffective or at worse redundant, are already causing organisations as the RAND Group to call for arms limitations agreements to be put in place.8 It is the HVG’s combination of manoeuvrability and high speed that make them a real game changer.9Although existing ICBMs reach hypersonic speeds, they follow a ballistic trajectory with little, or no, ability to manoeuvre and anti-missile defences and radars are designed to act against their predictable flight path. HGVs operate in the lower atmosphere where their flight surfaces allow them to change direction and manoeuvre against static defences and, of course, to change target in its terminal phase. Marrying this ‘target ambiguity’ with reduced warning times means that should their potential be realised, HGVs could make existing anti-missile technologies redundant.10The fact HGVs, such as China’s DF-17, are mounted on top of a conventional missile gives further cause for concern as their initial **launch signature could be mistaken for that of a ballistic missile attack**. An **ambiguous launch process coupled with compressed warning times, means that HGVs could well cause protagonists to ‘launch on warning’ whereby a retaliatory attack is initiated before incoming missiles have reached their targets.**11Fear, according to Thucydides, is one of the enduring human characteristics that has been the cause of many wars throughout history. The fear of a nation rising up and threatening the status quo of another Great Power can itself be sufficient to trigger conflict.12The nuclear age has already had its share of fear-induced crises. It was fear that almost had disastrous consequences in 1983 when America sought to improve the credibility of its nuclear forces in 1983 using a command post exercise codenamed Able Archer where the then Soviet Union misinterpreted America’s actions as intimidation rather than deterrence.13 The characteristics of HGVs mean they form an integral element of America’s CPGS which is seen as a way of deterring adversaries by striking high value targets at the very outset of any conflict. The concept of CPGS first appeared during the 2001 Bush Administration; today’s Department of Defence is tasked by the current Congress with delivering an initial capability by September 2022.14With its focus on the nuclear arena, it is perfectly understandable that America’s Nuclear Policy Review (NPR) does not reference the CPGS Programme, but the synergies would seem obvious. Indeed, Putin’s recent announcement of Russia’s intent to develop a nuclear-capable missile with an ‘unlimited’ range that was capable of eluding air defence systems suggests Russia is already thinking along those lines.15Threats such as this from either Russia or elsewhere will have a further destabilising effect on security as the NPR makes it clear that the role of the American nuclear capability is to protect the United States as well as its allies and partners.16 The nuclear age meant that more than ever before, **any plan to conquer an opponent would have to gamble everything on a successful first strike**.17The potential for hypersonic weapons to reduce the relevance of existing ballistic missile defences means that the nuclear stand-off that took the world through the cold war and beyond is now being challenged. Hypersonic weapons could conceivably challenge the present notion of nuclear deterrence.18 By operating at the strategic level with the ability to launch both conventional and nuclear strikes, **HGVs present a real risk to the relative stability between states and alliances.** The same can also be said of shorter-ranged HCMs which can still have a coercive effect on opponents at the operational level. HCMs such as Russia’s SS-N-33 Zircon, are designed to travel several hundred miles at speeds much faster than existing cruise missiles such as Britain’s Storm Shadow or America’s Tomahawk. They also present existing defences the same challenges as HGVs – target ambiguity, reduced warning times and manoeuvrability. The technology level for HCMs is still very much cutting edge but they offer relative simplicity and affordabilitywhen compared to HGVs and can be launched from conventional platforms such as aircraft, ships or submarines. **Proliferation is almost inevitable** with such weapons and lesser nations that acquire them may see HCMs as a deterrent against greater power intervention. HCMs provide a number of characteristics that appeal to the military in that they can strike at range whilst evading existing defences; this would include target sets that are difficult to hit using subsonic weapons. HCMs are likely to form an important element of any anti-access area denial (A2AD) strategy designed to either deny an opponent’s access to a particular region or restrict their ability to manoeuvre. HCMs could, for example, force US Carrier Strike Groups to operate further out to sea or threaten key locations such as the UK’s forward mounting base in Cyprus. In the context of the OODA Loop, HCMs also ‘compress’ the time available for a commander to engage or act.19Whilst the presence of HCMs in an inventory is itself is unlikely to trigger military conflict, they may embolden nations or regimes to pursue potentially destabilising regional agendas in parts of the world such as the Middle East or in the Sea of Japan and in this respect, they can certainly reduce the stability between states and alliances. The drive to develop new technologies is relentless and is embracing more actors, both state and non-state, all of whom are presented with lower entry requirements.20Whilst Freedman acknowledges technology as the main agent of change in warfare, he is quick to point out that its influence has invariably been shaped by the political context at the time.21For all of technology’s seductiveness, it does not operate in a vacuum. McMaster believes that those who believe technology will make the ‘next war’ fundamentally different to the previous one are neglecting its political and human dimensions. They are also rather conveniently forgetting that wars are invariably fought against determined and elusive opponents who will seek to adapt and overcome.22Insurgents operating in conjested cities in Iraq to counter coalition air power or swarms of light attack craft in the congested seas of the Middle East are recent examples. Over 100 years ago, the French Navy’s ‘Jeune Ecole’ movement espoused the use of emerging technology in the shape of torpedoes and torpedo boats to overcome more powerful enemy capital ships.23Who is to say that other emerging technologies will not blunt or even erase the threat of hypersonic weapons? Politicians and indeed the military both focus on new technologies and concepts that promise fast, cheap and efficient victories. Look no further than Pearl Harbour, Baghdad 2003 or the Schlieffen Plan to witness the appeal of the short war where a decisive knock-out blow is the silver bullet to anyone charged with taking the military initiative.24McMaster also believes the Revolution in Military Affairs and Shock and Awe tactics are further examples of what he calls a ‘Vampire Fallacy’ where the lure of a rapid and decisive victory is a difficult concept to kill off and it keep on re-appearing. Hypersonic weapons will also have to compete against and could be potentially neutralised by other disruptive technologies such as big data analytics, robotics, directed energy and artificial intelligence that the US National Defence Strategy considers areas that must be mastered to ‘fight and win the wars of the future’.25If technology cannot be relied upon to deliver as advertised, predicting the future muddies the water further. Only six years ago, the then Major General McMaster admitted “We have a perfect record in predicting future wars…and that record is zero percent.”26 The imminent arrival of hypersonic weapons would appear to herald another step change in technology’s ability to influence the level of security between states and alliances. The HGV’s ability to marry rapid and perhaps unstoppable global reach with a nuclear warhead will no doubt cause major powers to re-think the validity of nuclear deterrence. At the operational level, the relative accessibility of HCMs may well allow either major powers to enhance their A2AD programmes of lesser powers to flex their political aspirations in areas of the world already experiencing varying degrees of tension. Those who worship at the altar of technology may well have found their promised land – as long as, of course, the other disruptive technologies also bursting onto the scene, do not blunt or even negate the seductive lure of hypersonic weapons. Stepping away out of the technological arena for a moment, a common thread that weaves its way around the complexity of any new weapon system or strategy is man’s ability to adapt. The world has been here before. Although the speed and manoeuvrability of hypersonic weapons would suggest they may well be about to bring McMaster’s vampire back to life, they cannot be considered in isolation. It is not the ability of hypersonic weapons to win the next war that will decrease stability between nations and alliances, it is their false promise of a quick and bloodless victory that has the potential to prove fatal to commanders and politicians alike. History would suggest that their allure will be blunted by the constraints and conditions that this new type of weapon find itself operating in. Hypersonic weapons are not a zero-sum game, as history has shown us – it is more complicated than that.

### Deterrence

#### Deterrence is sustainable---even if overly reliant on certainty, that’s best and correlates with great power peace

Miller ’16 (Franklin C. Miller – MPA @ Princeton University’s Woodrow Wilson School, principal of The Scowcroft Group, served 22 years in senior positions in the Department of Defense and four additional years on the National Security Council staff as a special assistant to the President, member of the Defense Policy Board and the US Strategic Command Senior Advisory Group, five time recipient of the Defense Distinguished Civilian Service Medal, awarded the Norwegian Royal Order of Merit (Grand Officer) and the French Legion of Honor (Officer). Keith B. Payne – PhD with distinction in International Relational @ USC, Professor and Head of the Graduate Department of Defense and Strategic Studies, Missouri State University, former Deputy Assistant Secretary of Defense for Forces Policy, Chairman of the U.S. Strategic Command’s Senior Advisory Group, Strategy and Policy Panel, editor-in-chief of Comparative Strategy: An International Journal, and co-chair of the U.S. Nuclear Strategy Forum.. “No First-Use Advocacy: Contradictions and Guesswork,” 2016, https://www.realcleardefense.com/articles/2016/09/08/no\_first-use\_advocacy\_\_contradictions\_and\_guesswork\_\_110034.html)

Indeed, what limited historical evidence is available in this regard suggests that on some occasions US nuclear deterrence has been important to the deterrence of non-nuclear threats. For example, the most informed and comprehensive analyses of primary sources indicate that US nuclear deterrence at least contributed to the deterrence of Saddam Hussein’s use of CBW in the 1991 Gulf War.[v] Kimball and Reif simply dismiss or ignore these analyses when they claim as a sweeping rule that nuclear deterrence is unnecessary to deter threats that it, in fact, appears to have helped deter in 1991. In addition, it should be noted that from the founding of the nation state system in 1648 through 1945, the major powers in Europe went to war with each other an average of seven times per century; not even the recent memory of the catastrophic losses of World War I were sufficient to deter World War II. After 1945 and the establishment of nuclear deterrence, this history has not repeated itself and the percentage of the world’s population lost to war has declined dramatically. This does not “prove” the effectiveness of nuclear deterrence per se, but the association in time at least suggests the powerful limiting effect of nuclear deterrence on humanity’s willingness to go to war. The world was long at the nuclear zero “mountain top.” It most recently looked like World Wars I and II.

#### Nuclear Arsenals key to global peace – they prevent escalation – 3 warrants.

**Lieber and Press 15** [Keir Lieber and Darryl Press, (Georgetown University and Dartmouth College, Respectively) "How Much Is Enough? Testing Theories of Nuclear Deterrence" University of Virginia, 2015, https://politics.virginia.edu/wp-content/uploads/2015/11/Lieber-Press-VISC.pdf, DOA:12-4-2019 // WHSRS]

In 1949 the Soviet Union tested its first atomic bomb, but that did not protect them from nuclear attack. To the contrary, had a major war erupted in Europe anytime in the following decade, the United States planned to promptly launch an extensive nuclear-bombing campaign against targets throughout the Soviet Union, China, and Eastern Europe. The United States abandoned this nuclear-centric plan of massive strategic nuclear offensive only after the Soviets acquired an “assured retaliation” capability, not when the Soviets first joined the nuclear club or developed delivery systems capable of reaching the U.S. homeland. These findings appear to validate the deterrence school of assured retaliation, but for several reasons the evidence may actually suggest that assured destruction is the more stable foundation for deterrence. First, an assured retaliatory force was necessary to deter U.S. leaders during the Cold War, but a prudent deterrent must also deter highly risk- and cost-acceptant leaders of revisionist states. Few historians would portray U.S. Presidents Dwight Eisenhower or John Kennedy as revisionist leaders who sought to overturn the global order. Thus, the level of nuclear retaliatory capability necessary to deter these kinds of leaders would seem to present a lower bound for a robust deterrent. History is replete with more aggressive, cold-blooded, and risk-tolerant leaders. If reliably deterring these leaders during high-stakes crises is the fundamental purpose of a nuclear arsenal, then building an assured destruction force may be required. Second, an assured retaliation force may not be “assured” into perpetuity if states are engaged in a serious security competition. Many great powers in history have created first-rate militaries, which use peacetime to innovate and capitalize on new developments to maximize their fighting ability. Given the inherent unpredictability of technological change, an assured retaliation force today could become a mere minimum deterrent tomorrow. For example, in the current era, a small mobile missile force (when deployed out of garrison) is essentially survivable – but it may not be in the future if an adversary develops better intelligence, 36 surveillance, and reconnaissance (ISR) for tracking mobile missiles, perhaps while simultaneously deploying more effective missile defenses. During the Cold War, the Soviets might have been satisfied in the late 1960s or early 1970s with a small submarine-based force and decided to forego the major strategic buildup that followed. But given U.S. innovations in anti-submarine warfare, a Soviet “assured retaliation” force centered on a small submarine fleet and a few ICBMs could have been transformed into a “minimum deterrent” – perhaps without the Soviets ever knowing the change had taken place. The massive and diverse superpower arsenals of the late Cold War period were not realistically subject to downgrade through the efforts of one side or the other, but the smaller arsenals more prevalent in the 21st century could well be more susceptible to such vicissitudes. Readers familiar with the force requirement debates of the late Cold War period might erroneously interpret this discussion of the potential merits of assured destruction as a brief for building and maintaining massive nuclear arsenals. That is not the case. The actual assured destruction requirements for the United States vis-à-vis any existing adversary appear modest – even compared with the current shrinking force. Today the US has roughly 1,500 deployed strategic warheads, down roughly 85 percent from the end of the Cold War. Yet, an assured destruction force can probably be maintained below even this greatly reduced force level. Assured destruction does not require huge arsenals. Finally, it is essential to note that neither an assured retaliation capability – nor even the assured destruction” force that the Soviets started to field in the mid-1960s – were “enough” to deter NATO nuclear escalation during a major war in Europe. Right to the end of the Cold War, NATO was prepared to use nuclear weapons, if necessary, to prevent a major military defeat on the Continent. Even in the last decades of the Cold War, when NATO stood no real chance of winning a strategic nuclear exchange, the Alliance planned to escalate coercively to try to force the Soviets to halt the ongoing conflict. NATO’s initial strikes would probably have been aimed at targets in Eastern European – far from the Soviet homeland – but the message to the Soviet leadership would have been clear: the war is spinning out of control, and it’s time to stop. What scholars and policy analysts often overlook is that the logic of coercive nuclear escalation endures today – but the tables are turned. Future U.S. adversaries may have the same incentives that NATO faced in the last decades of the Cold War: to use tactical and theater nuclear strikes to stalemate the overwhelming conventional military power of the United States. A truism among U.S. nuclear force planners today is that no rational enemy would use nuclear weapons first against the United States. That belief ignores Cold War history – and U.S. strategic posture from the recent past. In sum, it was not until the early 1960s that the Soviet arsenal ceased to be primarily a target, and became a robust deterrent. Countries who maintain nuclear weapons presumably do so for the capabilities they provide – not for everyday peacetime relations, but for dark times. Cold War history suggests that to have a solid foundation of nuclear deterrence, which will deter in desperate times, symbolic arsenals – those without delivery systems, and those that are not truly survivable – are not sufficient. It is said that a little knowledge can be a dangerous thing; the same may be true about nuclear arsenals.

#### Nuclear weapons deter conflict – multiple warrants.

**Waltz 81** [Kenneth Waltz, () "“The Spread of Nuclear Weapons: More May Better,” Adelphi Papers, Number 171 (London: International Institute) https://www.mtholyoke.edu/acad/intrel/waltz1.htm, DOA:12-4-2019 // WHSRS]

Nuclear weapons have been the second force working for peace in the post-war world. They make the cost of war seem frighteningly high and thus discourage states from starting any wars that might lead to the use of such weapons. Nuclear weapons have helped main­tain peace between the great powers and have not led their few other possessors into military adventures.5 Their further spread, however, causes widespread fear. Much of the writing about the spread of nuclear weapons has this unusual trait: It tells us that what did no, happen in the past is likely to happen in the future, that tomorrow's nuclear states are likely to do to one another what today's nuclear states have not done. A happy nuclear past leads many to expect an unhappy nuclear future. This is odd, and the oddity leads me to believe that we should reconsider how wea­pons affect the situation of their possessors. The Military Logic of Self-Help Systems States coexist in a condition of anarchy. Self-help is the principle of action in an anarchic order, and the most important way in which states must help themselves is by providing for their own security. Therefore, in weighing the chances for peace, the first questions to ask are questions about the ends for which states use force and about the strategies and weapons they employ. The chances of peace rise if states can achieve their most important ends without actively using force. War becomes less likely as the costs of war rise in relation to possible gains. Strategies bring ends and means toget­her. How nuclear weapons affect the chances for peace is seen by considering the possible strategies of states. Force may be used for offence, for defence, for deterrence, and for coercion. Consider offence first. Germany and France before World War 1 provide a classic case of two adversaries each neglecting its defence and both planning to launch major attacks at the outset of war. France favoured offence over defence, because only by fighting an offensive war could Alsace-Lorraine be reclaimed. This illustrates one purpose of the offence: namely, conquest. Germany favoured offence over defence. believing offence to be the best defence, or even the only defence possible. Hemmed in by two adversaries. she could avoid fighting a two-front war only by concen­trating her forces in the West and defeating France before Russia could mobilize and move effectively into battle. This is what the Schlief­fen plan called for. The Plan illustrates another purpose of the offence: namely, security. Even if security had been Germany's only goal, an offensive strategy seemed to be the way to obtain it. The offence may have either or both of two aims: conquest and security. An offence may be conducted in either or in some combination of two ways: preventively or pre-emptively. If two countries are unequal in strength and the weaker is gaining, the stronger may be tempted to strike before its advantage is lost. Following this logic, a country with nuclear weapons may be tempted to destroy the nascent force of a hostile country. This would be preventive war, a war launched against a weak country before it can become disturbingly strong. The logic of pre-emption is different. Leaving aside the balance of forces, one country may strike another country's offensive forces to blunt an attack that it presumes is about to be made. If each of two countries can eliminate or dras­tically reduce the other's offensive forces in one surprise blow, then both of them are encour­aged to mount sudden attacks, if only for fear that if one does not, the other will. Mutual vulnerability of forces leads to mutual fear of surprise attack by giving each power a strong incentive to strike first. French and German plans for war against each other emphasized prevention over pre­emption - to strike before enemies can become fully ready to fight, but not to strike at their forces in order to destroy them before they can be used to strike back. Whether pre-emptive or preventive, an offensive first strike is a hard one. as military logic suggests and history confirms Whoever strikes first does so to gain a decisive advantage. A pre-emptive strike is designed to eliminate or decisively reduce the opponent's ability to retaliate. A preventive strike is designed to defeat an adversary before he can develop and deploy his full potential might. Attacks. I should add, are not planned according to military logic alone. Political logic may lead a country another country to attack even in the absence of an expectation of military victory, as Egypt did in October of 1973. How can one state dissuade another state from attacking? In either or in some combination of two ways. One way to counter an intended attack is to build fortifications and to muster forces that look forbiddingly strong. To build defences so patently strong that no one will try to destroy or overcome them would make international life perfectly tranquil. I call this the defensive ideal. The other way to inhibit a country's intended aggressive moves is to scare that country out of making them by threatening to visit unacceptable punishment upon it. 'To deter' literally means to stop someone from doing something by frightening him. In contrast to dissuasion by defence, dissuasion by deterrence operates by frightening a state out of attacking, not because of the difficulty of launching an attack and carrying it home, but because the expected reaction of the attacked will result in one's own severe punish­ment. Defence and deterrence are often confused. One frequently hears statements like this: 'A strong defence in Europe will deter a Russian attack'. What is meant is that a strong defence will dissuade Russia from attacking. Deterrence is achieved not through the ability to defend but through the ability to punish. Purely deterrent forces provide no defence. The message of a deterrent strategy is this: 'Although we are defenceless, if you attack we will punish you to an extent that more than cancels your gains'. Second-strike nuclear forces serve that kind of strategy. Purely defen­sive forces provide no deterrence. They offer no means of punishment. The message of a defensive strategy is this: 'Although we cannot strike back, you will find our defences so difficult to overcome that you will dash yourself to pieces against them'. The Maginot Line was to serve that kind of strategy. States may also use force for coercion. One state may threaten to harm another state not to deter it from taking a certain action but to com­pel one. Napoleon III threatened to bombard Tripoli if the Turks did not comply with his demands for Roman Catholic control of the Palestinian Holy Places. This is blackmail, which can now be backed by conventional and by nuclear threats. Do nuclear weapons increase or decrease the chances of war? The answer depends on whether nuclear weapons permit and encour­age states to deploy forces in ways that make the active use of force more or less likely and in ways that promise to be more or less destruc­tive. If nuclear weapons make the offence more effective and the blackmailer's threat more compelling, then nuclear weapons increase the chances of war—the more so the more widely they spread. If defence and deterrence are made easier and more reliable by the spread of nuclear weapons, we may expect the opposite result. To maintain their security, states must rely on the means they can generate and the arrangements they can make for themselves. The quality of international life therefore varies with the ease or the difficulty states experience in making themselves secure. Weapons and strategies change the situation of states in ways that make them more or less secure, as Robert Jervis has brilliantly shown. If weapons are not well suited for conquest, neighbours have more peace of mind. Accord­ing to the defensive-deterrent ideal, we should expect war to become less likely when weaponry is such as to make conquest more difficult, to discourage pre-emptive and pre­ventive war, and to make coercive threats less credible. Do nuclear weapons have those effects? Some answers can be found by con­sidering how nuclear deterrence and how nuclear defence may improve the prospects for peace. First, wars can be fought in the face of deter­rent threats, but the higher the stakes and the closer a country moves toward winning them, the more surely that country invites retaliation and risks its own destruction. States are not likely to run major risks for minor gains. Wars between nuclear states may escalate as the loser uses larger and larger warheads. Fearing that.states will want to draw back. Not escalation but **de-escalation becomes likely**. War remains possible. but victory in war is too dangerous to fight for. If states can score only small gains because large ones risk retaliation, they have little incentive to fight. Second, states act with less care if the expect­ed costs of war are low and with more care if they are high. In 1853 and 1854, Britain and France expected to win an easy victory if they went to war against Russia. Prestige abroad and political popularity at home would be gained. if not much else. The vagueness of their plans was matched by the carelessness of their acts. In blundering into the Crimean War they acted hastily on scant information, pandered to their people's frenzy for war, showed more concern for an ally's whim than for the adversary's situation, failed to specify the changes in behaviour that threats were supposed to bring. and inclined towards testing strength first and bargaining second. In sharp contrast, the presence of nuclear weapons makes States exceedingly cautious. Think of Kennedy and Khruschev in the Cuban missile crisis. Why fight if you can't win much and might lose everything? Third, the question demands a negative answer all the more insistently when the deter rent deployment of nuclear weapons contributes more to a country's security than does conquest of territory. A country with a deter-rent strategy does not need the extent of terri­tory required by a country relying on a conven­tional defence in depth. A deterrent strategy makes it unnecessary for a country to fight for the sake of increasing its security, and this removes a major cause of war. Fourth, deterrent effect depends both on one's capabilities and on the will one has to use them. The will of the attacked, striving to preserve its own territory, can ordinarily be presumed stronger than the will of the attacker striving to annex someone else's territory. Knowing this, the would-be attacker is further inhibited.

### Shift to Tech

#### Advanced weaponry is inevitable and potentially catastrophic—only the threat of nuclear first-use deters disastrous cyber, nano, and bioweapon attacks.

Colby 9—Eldridge Colby, fellow at the Center for a New American Security, JD from Yale Law (“Nuclear Weapons and Expanded Deterrence Against Catastrophic Attacks,” Chapter 15 in Part I: Deterrence of *In the Eyes of Experts: Analysis and Comments on America’s Strategic Posture*, US Institute of Peace Press, https://www.usip.org/sites/default/files/In%20the%20Eyes%20of%20the%20Experts%20full.pdf)

Summary: The United States and its allies will face increasingly sophisticated and dangerous weapons of catastrophic destruction due to the accelerating advance and dissemination of technology. Nuclear weapons will play a key role in deterring the use of these weapons by state or non-state opponents as long as the United States continues credibly to threaten retaliation, to include nuclear usage, in response to catastrophic strikes. A “no first use” posture would be incompatible with an effective deterrent of this kind, and the Commission should consider stating so. Nuclear weapons will not, however, be sufficient to deter catastrophic attacks. Instead, the Commission should consider voicing support for the Administration’s commendable but poorly implemented policy of expanding deterrent threats to include those who enable or support catastrophic attacks against us or our allies. Text: Accelerating advances across science and technology, to include in computing, nanotechnology, biotechnology, as well as in the more mature nuclear field, combined with our staggering advantages in conventional warfare, make it a near certainty that the United States will in the coming decades face increasingly powerful, sophisticated, and dangerous weapons, tools, and systems. Though traditional state rivals will likely be the principal wielders of these new technologies, their dissemination outwards to marginal states and downwards to non-state actors means that the U.S. will confront threats from a variety of types and groupings of actors. While the parameters of these new technologies are uncertain, we can be confident that they will be not only tremendously powerful, disruptive, and damaging, but also supremely elusive and cost-efficient. Non- and counter-proliferation efforts will be a critical mitigant of these deleterious trends, but, given that they are the necessary obverse of the benefits of new innovation and that challenger powers will so clearly benefit from them, they cannot be halted. They instead must be managed. U.S. nuclear weapons should play a partial but central role in dealing with the rise of these threats. Our nuclear arsenal will do so because, so long as it is maintained at a sufficient level of quality and quantity and appropriately postured, it constitutes a decisive asymmetric retaliatory capability that ipso facto makes the use of any weapon of catastrophic consequence, however novel, against us or our allies more costly than beneficial. Further, by ensuring this decisive asymmetry they allow us and our allies the freedom not to have to match (either with similar weapons or defensively) every advance in weapons technology our opponents and rivals may make (though maintenance of an edge in some fields is advisable and even necessary). As with the NATO allies’ effective decision not to match Warsaw Pact capabilities after the failure of the Lisbon Treaty commitments and the formal decision to forswear chemical and biological weapons in the face of massive Soviet superiority (the latter clandestine) in those fields, the U.S. and its allies in the 21st century can reliably invest in maintaining an assured nuclear deterrent to render catastrophic acts of destruction irrational as such rather than seeking symmetry in armaments. This logic would counsel continuing to resist adopting a “no first use” doctrine and perhaps even considering, as our opponents and rivals begin to field disruptive new technologies, reminding them of our willingness to respond to catastrophic aggression of any kind with the tools most suited to our purposes. This would point towards restraining and perhaps walking back what has, in light of overwhelming conventional U.S. military superiority over the last two decades and an unusually calm international scene, become an informal “no first use” policy. More broadly, it would counsel shoring up the credibility of our threats to respond asymmetrically as we deem appropriate, whether with nuclear weapons or otherwise. This approach would have both direct deterrent as well as dissuasive benefits. Opponents facing the real prospect of firm and potentially severe retaliation by the U.S. will price the reality of this American commitment into their strategic calculations, thus rendering arms competitions less likely.

### Shuts Down Conflict

#### Proliferation deters conflict.

**Drake 11** [Bennett Drake=staff writer for Bloomberg Businessweek, “GIVE NUKES A CHANCE; CAN THE SPREAD OF NUCLEAR WEAPONS MAKE US SAFER?”, Boston Globe, original publication date 3/20/05 Last updated 8/31/11 // WHSRS]

KENNETH N. WALTZ, adjunct professor of political science at Columbia University, doesn't like the phrase "nuclear proliferation." "The term 'proliferation' is a great misnomer," he said in a recent interview. "It refers to things that spread like wildfire. But we've had nuclear military capabilities extant in the world for 50 years and now, even counting North Korea, we only have nine nuclear countries." Strictly speaking, then, Waltz is as against the proliferation of nuclear weapons as the next sane human being. After all, he argues, "most countries don't need them." But the eventual acquisition of nuclear weapons by those few countries that see fit to pursue them, that he's for. As he sees it, nuclear weapons prevent wars. "The only thing a country can do with nuclear weapons is use them for a deterrent," Waltz told me. "And that makes for internal stability, that makes for peace, and that makes for cautious behavior." Especially in a unipolar world, argues Waltz, the possession of nuclear deterrents by smaller nations can check the disruptive ambitions of a reckless superpower. As a result, in words Waltz wrote 10 years ago and has been reiterating ever since, "The gradual spread of nuclear weapons is more to be welcomed than feared." Waltz is not a crank. He is not a member of an apocalyptic death cult. He is perhaps the leading living theorist of the foreign policy realists, a school that sees world politics as an unending, amoral contest between states driven by the will to power. His 1959 book, "Man, the State, and War," remains one of the most influential 20th-century works on international relations. In recent weeks, however, the spread of nuclear weapons has taken on what might appear to be a wildfire- like quality. North Korea has just declared itself a nuclear power. Iran is in negotiations with the United States and Europe over what is widely suspected to be a secret weapons program of its own. Each could kick off a regional arms race. And North Korea in the past has sold nuclear technology to Libya and Pakistan, while Iran sponsors Hezbollah and Hamas. As the Nuclear Nonproliferation Treaty, the backbone of nonproliferation efforts for the past 35 years, comes up for review this May, there's an increasing sense that it is failing. In such a context, Waltz's argument may seem a Panglossian rationalization of the inevitable. Still, although heads of state, legislators, intelligence officials, and opinion columnists are nearly united in their deep concern over the world's nuclearization, the scholars who spend their time thinking about the issue are in fact deeply divided over the consequences of the spread of nuclear weapons, even to so-called "states of concern" like Iran and North Korea. Few among Waltz's colleagues share his unwavering confidence in the pacifying power of nuclear weapons. But plenty among them see at least some merit in the picture he paints. In part, the disagreement between Waltz and his critics is over the meaning and value of nuclear deterrence in a post-Cold War world. But it's also an argument over the motives that drive some countries to pursue nuclear weapons and others to want to keep the nuclear genie to themselves. . . . Waltz spells out his theory most thoroughly in the 1995 book "The Spread of Nuclear Weapons," co-written with the Stanford political scientist Scott D. Sagan in the form of an extended debate. Updated and republished two years ago to take into account the nuclearization of India and Pakistan, it contains the same arguments Waltz makes today in interviews. Put simply, a war between nuclear powers cannot be decisively won without the risk of total destruction. Since the risk of escalation in any conflict is so high, nuclear states grow cautious. "If states can score only small gains because large ones risk retaliation," Waltz writes, "they have little incentive to fight." When fighting does break out, it is likely to be a localized proxy conflict like the Korean War instead of, say, a Soviet invasion of Western Europe. Nuclear weapons, he adds, even blunt the urge for territorial expansion, since they contribute far more to a country's security than any geographical buffer could. Even Graham Allison, a dean and professor at Harvard's Kennedy School of Government and one of the country's most visible nonproliferation crusaders, concedes some of Waltz's argument. "There's something known in the literature as a 'crystal ball effect,'" Allison says. "With a nuclear war, probably most of the people living in the capital are going to be killed, including the leader and his family, so it brings it home. You have a positive effect, and you can certainly see that in the India-Pakistan relationship" since both countries acquired their nuclear arsenals. Yet Allison - whose latest book, the widely noted "Nuclear Terrorism: The Ultimate Preventable Catastrophe," was published last August - dismisses Waltz's larger linkage between proliferation and security as "perverse, but nonetheless interesting." In particular, Allison argues, the time period just after a country goes nuclear - in the case of North Korea, the present moment - is the most dangerous. This is partly because nascent nuclear nations don't have the best command and control systems for their weapons. More troubling is that historically, in every so-called nuclear "conflict dyad" - US/ USSR, USSR/China, India/Pakistan - the first of the two to go nuclear came close to launching a preemptive attack to profit from its nuclear advantage. And the precarious hold on power of the government in a nuclear nation like Pakistan only adds to the volatile mix. Even today's long-established nuclear powers, Allison points out, may owe their continued survival as much to luck as logic. John F. Kennedy himself put the chance of nuclear war during the Cuban Missile Crisis at one in three - odds, Allison notes, that are twice as high as those in Russian Roulette. To share Waltz's faith in the pacifying effects of proliferation, says David Goldfischer of Denver University's Graduate School of International affairs, is to subscribe to a sort of "nuclear theology." (Goldfischer is himself a proponent of what he calls Mutual Defense Emphasis - a proposed treaty regime in which nuclear arsenals would be sharply reduced and mutually acceptable missile defenses installed by opposing nuclear powers.) Waltz, Goldfischer charges, "is utterly convinced that there's a rational core in every brain similar to his own, which will act somehow at the critical moment, and that no one will be able to reach a leadership position in any society who will make the potentially suicidal decision to launch when a massive retaliation is a certainty." And that doesn't begin to account for the possibility of an accidental launch or an attack by an Al Qaeda operative whose effective statelessness and hunger for martyrdom make him undeterrable. John J. Mearsheimer, a political scientist at the University of Chicago and another preeminent realist thinker, describes himself as closer to Waltz than to Allison on the issue. Mearsheimer agrees with Waltz, for example, that nuclear states, no matter how "rogue," are unlikely to give their weapons to terrorists. Whatever its sympathies, Mearsheimer argues, "Iran is highly unlikely to give nuclear weapons to terrorists, in large part because they would be putting weapons into the hands of people who they ultimately did not control, and there's a reasonably good chance that they would get Iran incinerated" if the weapon was traced back to the regime in Tehran. "Any country that gave [nuclear weapons] to terrorists who would use them against the US," Mearsheimer adds, "would disappear from the face of the earth." . . . The problem of "loose nukes" - in particular, Russia's inability in the years since the Cold War to keep track of all its nuclear materials - shows that even a country's strong interest in maintaining control of its nuclear weapons is no guarantee that some won't fall into the wrong hands, raising the threat of nuclear terrorism. Nevertheless, thinkers like Waltz and Mearsheimer, with their dogged focus on the calculus of national advantage and interest, raise a question that tends to get lost in much of the news coverage of proliferation: Do nuclear states like the United States oppose proliferation simply out of concern for their citizens' safety, or is there something more strategic at work? In Waltz's formulation, nations acquire nuclear weapons not to menace their neighbors but to protect themselves. And to the governments of North Korea and Iran, the primary threat is the United States. "If you were making decisions for North Korea or Iran," Waltz asks, "wouldn't you be deadly determined to get nuclear weapons, given American capability and American policy?" Seen this way, the near- term proliferation threat is less to our homeland - neither North Korea or Iran, for example, has the missile technology to deliver a warhead to the continental US - than to our ability to project power and shape world affairs. The United States, in other words, worries as much about being deterred as being attacked. "The truth is that countries that have nuclear weapons will be off-limits," says Mearsheimer, "which is why [those countries] want them." The more nuclear nations, then, the less leverage America has. According to political scientist Robert Jervis, Waltz's colleague at Columbia, "We can't threaten to invade them. We even will have less ability to launch really heavy covert operations." Even our allies, should they go nuclear, will start to distance themselves, Jervis predicts. "If proliferation were to spread to Japan, South Korea, and Saudi Arabia - they will obviously still need us, but not as much, and it reduces our leverage in that way as well." By this logic, one option for the United States would be to play down the importance of nuclear weapons. As Jervis notes, Washington's deep and vocal concern over proliferation only enhances the perceived value of such weapons. "But we have overwhelming conventional superiority," says Jervis, "and we'd be much better off if [nuclear weapons] were abolished. We should be saying they're not such a big deal. What has France gotten from its nuclear weapons?" Ultimately, however, no amount of military might allows a country to wish away the Bomb. Whether or not nuclear weapons make the world a more dangerous place, they certainly make it a more humbling one, and their spread only narrows the options of the world's sole superpower.

### All-Around Retaliations

#### Proliferation creates deterrence due to the potential for all-around retaliations – solves case.

Berkowitz 85 [Bruce D. Berkowitz= Associate Lecturer in Political Science at George Washington University, “Proliferation, Deterrence, and the Likelihood of Nuclear War”, The Journal of Conflict Resolution Vol. 29, No. 1 , Mar., 1985, [http://www.jstor.org/stable/174041 //](http://www.jstor.org/stable/174041%20//) WHSRS]

The pro-proliferation argument. Other writers have argued that although proliferation may increase the probability of nuclear war in the short run, in the long run, proliferation will decrease and eventually eliminate the probability of nuclear war. Often these writers admit that, in the best of worlds, nuclear weapons would not exist. But they go on to argue that, because nuclear technology has been discovered and widely promulgated, nuclear disarmament is impossible. Therefore, they conclude, the best feasible goal is to proliferate nuclear weapons selectively, but steadily. One of the earliest proponents of this argument was the retired French Air Force General Pierre Gallois (1961). More recently, the argument has been formalized and elaborated by such scholars as Intriligator and Brito (1981), Waltz (1982), and Bueno de Mesquita and Riker (1982). The argument of these writers is as follows: Any nuclear power can launch a nuclear attack against any nonnuclear power, because there is no threat of retaliation. However, nuclear powers cannot attack other nuclear powers (at least not with nuclear weapons), because any such attack will be returned in kind. These theorists admit that proliferation 1. ." in its early stages may raise the probability of nuclear war, because an increasing number of nuclear powers would be poised to attack a fairly large number of nonnuclear powers. But, they say, in its later stages proliferation will lower the probability of nuclear war because most states would then have the ability to retaliate and would thus be immune from nuclear attack. Indeed, these theorists would claim that when all states have nuclear weapons, the probability of their being used would be zero, because every state could threaten retaliation. The main danger of proliferation, according to this argument, is that obstacles to proliferation may stop the spread of nuclear weapons halfway, so that a significant number of nuclear powers would be presented with a large number of nonnuclear powers, the kind of situation most likely to breed nuclear war.' Governments have tended to choose between the two classical arguments pragmatically, the rule for policy being that "where you stand depends on where you sit." Supporters of the anti-proliferation argument tend to be states that already possess nuclear weapons (or that have firm alliances with nuclear powers), states that have little hope of developing nuclear weapons, and states that either have no need for nuclear weapons or that have rejected them on moral grounds. Supporters of the pro-proliferation argument tend to be states that have some real prospects for developing nuclear weapons in the near future (e.g., Argentina and Brazil), and especially the subset of these states that face unfriendly neighbors that have either a nuclear force of their own or conventional forces so large that

### Conventional War

#### **Aff massively increases risk of destructive conventional warfare and circumvention – that outweighs.**

Keck '14 (Zachary Keck; Zachary Keck was formerly Managing Editor of The Diplomat where he authored The Pacific Realist blog. Previously, he worked as Deputy Editor of e-International Relations and has interned at the Center for a New American Security and in the U.S. Congress, where he worked on defense issues; 3-24-2014; "A Global Zero World Would Be MAD"; https://thediplomat.com/2014/03/a-global-zero-world-would-be-mad/, No Publication, accessed 12-6-2019; JPark)

This week world leaders are gathering in the Netherlands for the 3rd Nuclear Security Summit. Although the purpose of the Nuclear Security Summits is to secure nuclear materials around the world, it is also part of President Barack Obama’s larger goal of eliminating all nuclear weapons. This goal was announced in President Obama’s infamous Prague speech in 2009 during which he committed the U.S. to work towards a world free of nuclear weapons. Since that speech, leaders from around the world have joined President Obama in endorsing global nuclear disarmament, including the UN Security Council, whose permanent members are the same five states the Nuclear Non-Proliferation Treaty (NPT) recognizes as nuclear weapon states. There are many reasons to support the global nuclear disarmament movement, but all are ultimately geared towards creating a more **peaceful world** free from the menace of nuclear war. As President Obama explained in his famous Prague speech in 2009, eliminating nuclear weapons would “leave this world more prosperous and more peaceful than we found it.” In fact, global nuclear disarmament, if achieved, is likely to lead to a **less** peaceful world and one where the threat of nuclear war is, paradoxically, much greater. One of the biggest dangers of nuclear disarmament is not that a rogue nation would cheat, but that there would be no nuclear deterrence to **prevent conventional conflicts** between great powers. Nearly seven decades removed from the end of the last great power conflict, it’s easy to **understate** just **how destructive** these wars can be. For that reason, it’s imperative that we periodically revisit history. The number of deaths in the last great power conflict, WWII, is generally calculated to be anywhere from 50 to 70 million people, which includes civilian and military deaths. However, the global population was only about 2.25 billion at the start of WWII, or less than a third of the current global population of 7.152 billion. Thus, assuming the same level of lethality, a great power conflict today would result in between **150** and **210 million** deaths, many times greater than an **accidental nuclear launch** or **nuclear terrorist** attack, however devastating both would be. There’s little reason to believe that a global war today— even if fought conventionally— would not be **many times more lethal** than WWII, however. Although strategic bombings were certainly a factor in WWII, for much of the war technology and rival air forces limited their effectiveness. Offensive operations against civilian populations in a modern conflict would be much more effective. To begin with, most nations would turn to launching ballistic and cruise missiles in unprecedented quantities. Like Korea and Vietnam, but unlike most of WWII, there would essentially be **no methods** for defending civilian **population centers** against these missiles. Moreover, because of urbanization, populations are far more concentrated than they were in WWII. According to the UN, the number of people living in urban areas more than quadrupled between 1950 and 2005, increasing from 732 million (29 percent of total population) to 3.2 billion (49 percent of population). In 2010 more than **half the world population** was living in **cities** and this number is expected to rise to 60 percent by 2030. By mid-century, a full 70 percent of the world’s population, or 6.4 billion people, will be urban dwellers. Thus, the combination of missile attacks for which there are few defenses, combined with much **greater** population **density**, would alone make WWIII much more lethal than either of its predecessors. But as deadly as a modern conventional war would be in a nuclear free world, the real danger is that it wouldn’t remain conventional. Along with making great power conflict far more likely, global nuclear disarmament offers no conceivable mechanism to ensure that such a war would remain non-nuclear. In fact, common sense would suggest that **immediately following** the outbreak of hostilities — if not in the run-up to the war itself — every previous nuclear power would make a rapid dash to **reconstruct their nuclear forces** in the shortest amount of time. The result would not merely be a return to the nuclear world we currently inhabit. Rather, some countries would reconstruct their nuclear weapons **more quickly** than others, and no power could be sure of the progress their rivals had made. The “winners” in this nuclear arms race would then have **every incentive** to **immediately** **use** their new nuclear capabilities against their adversaries in an effort to quickly end the conflict, eliminate others’ nuclear weapons-making capabilities, or merely out of fear that others will launch a debilitating strike on its small and vulnerable nuclear arsenal. There would be no mutually assured destruction in such an environment; a “**use-it-or-lose-it**” mentality would prevail.

#### Empirics confirm—more nuclear states equals less war.

Asal and Beardsley ‘7 [Victor Asal, (Department of Political Science, State University of New York, Albany), Kyle Beardsley, (Department of Political Science, Emory University), “Proliferation and International Crisis Behavior”, Journal of Peace Research, vol. 44, no. 2, 2007, pp. 139–155] AG

As we can see, the impact of an increase in the number of nuclear actors is substantial. Starting from a crisis situation without any nuclear actors, including one nuclear actor (out of five) reduces the likelihood of fullscale war by nine percentage points. As we continue to add nuclear actors, the likelihood of full-scale war declines sharply, so that the probability of a war with the maximum number of nuclear actors is about three times less than the probability with no nuclear actors. In addition, the probabilities of no violence and only minor clashes increase substantially as the number of nuclear actors increases. The probability of serious clashes is relatively constant. Overall, the analysis lends significant support to the more optimistic proliferation argument related to the expectation of violent conflict when nuclear actors are involved. While the presence of nuclear powers does not prevent war, it significantly reduces the probability of full-scale war, with more reduction as the number of nuclear powers involved in the conflict increases.

#### Nukes deter conventional warfare and cause countries to be more cautious – treaties fail because of tangentially related language implemented – agreements and enforcement relies on the honor system which is easily circumvented for noncompliance.

**Zimmerman 17** [Peter D. Zimmerman, () "Nuclear weapons deter conventional wars" No Publication, 9-16-2017, https://gulfnews.com/opinion/op-eds/nuclear-weapons-deter-conventional-wars-1.2091053, DOA:12-4-2019 // WHSRS]

This month, the Treaty on the Prohibition of Nuclear Weapons will open for signature at the United Nations. Signatories will promise never to “develop, test, produce, manufacture ... possess or stockpile nuclear weapons”; never to transfer weapons to other parties nor to receive them; and never to “use or threaten to use nuclear weapons”. The treaty’s aims, if they could be universally effected, are noble. After all, the prospect of nations — including an international pariah like North Korea — facing off with their respective nuclear arsenals is horrific. Their renewed use in war would be catastrophic. But there is a risk in aiming for total nuclear disarmament, because deterring nuclear war isn’t their only legitimate use. Nuclear weapons also deter conventional war. In recent decades, great powers have fought proxy wars, but since 1945, they have not come into direct armed conflict. Through the Cold War, nuclear weapons kept the peace in Western Europe. Only once, during the Cuban missile crisis, did deterrence come close to breaking, but the then United States president, John F. Kennedy, and Soviet Premier Nikita Khrushchev and the rest of the world learned well. India and Pakistan have skirmished in recent decades, but the realisation that a conflict could escalate to nuclear catastrophe has contributed to the rival nations eventually standing down. The probability that Israel has nuclear weapons is the ultimate guarantor of its existence. Since the Soviet Union’s first atomic test in 1949, the existence of nuclear weapons in many hands has not only deterred the use of nuclear weapons, but also made nuclear possessors and their adversaries think carefully about the desirability of going to war at all. When conflict has broken out, the nuclear deterrent has limited war aims to those short of total destruction of adversary nations or regime change. That’s why North Korea has sought nuclear capability so fervently. This is the “porcupine theory”, advanced by, among others, the late strategist Kenneth Waltz: After Hiroshima and Nagasaki, many states wanted nuclear weapons, not for offensive purposes, but as a hedge against attack by other nations. If peace is desirable, and it is, this seems, at first, philosophically unappealing; non-proliferation and nuclear elimination sound so much safer. But with obvious limits, this hedge has served as a practical solution to an intractable problem. It’s a good thing, then, that the United Nations nuclear treaty is probably going nowhere. For starters, the nuclear powers aren’t on board: When negotiations concluded on July 7, 122 nations voted fodir the treaty. But the Netherlands, the only Nato country to participate in negotiations, voted against it. As CBS News notes, none of the countries “known or believed to possess nuclear weapons” — the US, Russia, Britain, China, France, India, Pakistan, North Korea and Israel — supports the treaty. Sweden was the only country with long-standing, close ties to NATO that voted for it. Most states voting for the treaty lack the capability, or significant interest, in acquiring nuclear weapons. If the proverbial mice decide to bell the cat, success will depend upon the cat’s consent to wear a bell. And the agreement was rushed: Other international arms-control agreements, such as the prohibitions on chemical and biological weapons, on nuclear testing, and on strategic arms reduction have taken years and even decades to negotiate. The nuclear ban was completed after only a few days of negotiation in March and a few weeks in June and July. The treaty’s language is unhelpful. The preamble includes references to an assortment of humanitarian causes, bearing only the most tangential relationship to the topic at hand: “Disproportionate impact of nuclear-weapon activities on indigenous peoples”, “disproportionate impact on women and girls”, and the role of the “Red Cross and Red Crescent Movement”. Though “trust but verify”, as former US president Ronald Reagan often put it, remains the core of any international arms-control agreement, the UN treaty presents a nebulous mention that weapons states shall cooperate with a “competent international authority or authorities to negotiate and verify the irreversible elimination of nuclear weapons programmes”. A “State Party that owns, possesses or controls nuclear weapons ... shall immediately remove them from operational status” and later “submit to the secretary-general of the United Nations a declaration that it has fulfilled its obligations”. The mechanics by which nuclear possessor states rid themselves of their weapons are undefined. For now, the agreement relies on the honour system, rather than enforceable penalties for noncompliance — critical details kicked down the road to a document that doesn’t yet exist. Even if the document had been perfectly drafted, and had the leaders of the effort gained a measure of buy-in from nuclear states about their interests, total nuclear abolition remains a bad idea. As former British prime minister Margaret Thatcher had said, 30 years ago, in a speech delivered in Russia: “Conventional weapons have never been enough to deter war. Two world wars showed us that. They also showed us how terrible a war fought even with conventional weapons can be. Yet, nuclear weapons have deterred not only nuclear war but conventional war in Europe as well. A world without nuclear weapons may be a dream, but you cannot base a sure defence on dreams. Without far greater trust and confidence between East and West than exists at present, a world without nuclear weapons would be less stable and more dangerous for all of us.” The planet would be safer with far fewer nuclear weapons, but more dangerous with none; and would be a way to prove all such weapons have been eliminated. Some hydrogen bombs are small enough to hide in a coat closet — verification of their destruction, in the absence of a yet-to-be-determined mechanism, and in the absence of a strong international consensus, is impossible. And the loss of the barrier to conventional escalation would be ruinous. **Nuclear weapons cannot be un-invented**. If the treaty’s proponents had their way, the world would eventually regret it.

### US Allied Prolif

#### US withdrawal causes allied prolif.

Bromund '18 (Theodore R. Bromund; Senior Research Fellow in Anglo-American Relations; Ted Bromund studies Anglo-American relations, U.S. relations with Europe and the EU, and the U.S.’s leadership role in the world., ; 3-5-2018; "Obama’s Ugly Legacy in the Mideast"; https://www.heritage.org/middle-east/commentary/obamas-ugly-legacy-the-mideast, Heritage Foundation, accessed 12-3-2019; JPark)

The war in Syria was like a stone thrown into a lake. The initial splash has subsided, but the waves are spreading throughout the region. Where the waves meet the shores of the lake, they splash again into new wars. The wars of the Persian Gulf, the Kurds, and Israel are beginning. The modern **Middle East** has rarely been peaceful. But today, its wars have a new shape. A few years ago, they were in the heartland of Syria. Now, they are on the periphery — Yemen, Qatar, Turkey, and soon, Israel. These are the wars after the Syrian war — and they flowed naturally from it, and from U.S. policy. The Obama administration believed that the United States was too involved in the Middle East. That idea was not completely wrong: fundamentally, Asia and Europe are more important to the United States than the Persian Gulf. But it was wrong to believe that less U.S. involvement would bring more peace. The role of U.S. power — everywhere — is to **reassure our friends and deter our enemies**. We often focus too much on the deterrence role, but the reassuring role is often just as important. If we were not there to reassure, our **friends** would find it necessary to act in ways **contrary** to our **interests**. In Europe, the purpose of NATO was as much to **reassure Western Europe** as it was to deter the USSR. In Asia, our alliances with Japan and South Korea keep their **nervousness** about China and North Korea within tolerable limits. In the Persian Gulf, we backed up Saudi Arabia against Iran. The reason we do this is not because we are nice guys. It’s because we don’t want **Germany, Japan, South Korea,** and **Saudi Arabia** to become **nuclear powers** to protect themselves. And we don’t want that because we believe that, on the whole, we’re safer if the spread of nuclear weapons is limited. When the United States withdraws, we expect our allies to start taking out **insurance policies** on their own, and our adversaries to become more aggressive. That is what we have seen in the Middle East. As the Obama administration **withdrew**, Saudi Arabia grew nervous, and Iran advanced. The result of that advance was the war in Syria. Of course, even before Iran was involved, the Arab Spring brought revolt to Syria. But it was Iran that made the struggle what it became — a war meant to spread Iranian power. Today, the Saudis are engaged in wars on several fronts. At its rear, it struggles to pacify Yemen. On its flank, it blockades Qatar. A blockage, classically, is an act of war. These are the acts of a **new leadership** seeking to control its **neighbors** out of fear for its region. The same is true, in a lesser way, of Turkey, which fears the Syrian war has brought new assertiveness to the Kurds. And so Ankara wages war on the Kurds, both inside Turkey and on its borders. And then there is Israel. If Iran controls Syria, as it now does, Lebanon cannot be free — and if Lebanon is dominated by Iran’s Hezbollah, Israel will face greater threat. That day is not far away. The recent Israel airstrikes in Syria, the Iranian military presence in Syria, and the growth of Hezbollah’s military capabilities in the Syrian war tell us that the next war on the edges of the Middle East will likely be waged against Israel. These wars are the result of antagonisms than began long before 2008. But old hatreds alone do not make wars, an opportunity is also required. And the withdrawal of the United States created that opportunity. So welcome the Middle East to the wars after the war — the wars of Barack Obama.

### Waste Disposal

#### Normal means waste disposal produces a humanitarian crisis.

Taebi '17 (Behnam Taebi; Behnam Taebi is Associate Professor of Ethics of Technology at Delft University of Technology and Associate at Belfer Centre for Science and International Affairs, Harvard Kennedy School, Harvard University, ; 5-15-2017; "Behnam Taebi: Disposing of nuclear waste is a challenge for humanity"; https://www.newsweek.com/disposing-nuclear-waste-challenge-humanity-behnam-taebi-609468, Newsweek, accessed 12-6-2019; JPark)

Last week, on May 9, a tunnel containing barrels of highly radioactive waste collapsed at the Nuclear Reservation in Hanford, Washington. Despite the reassuring reports that no workers were injured and no major evacuations were needed, the accident reminds us of an immense problem. This site, a legacy of the Cold War, hosts waste from several decades of military plutonium production during and after World War II. The facilities are old, which raises the question: was this an isolated accident or something that could happen again? A massive clean-up process has been going on since 1980s at Hanford and it is expected to continue until 2160, with the projected cost of approximately 100 billion dollars. The problem with this waste is, however, much larger than these costs, and includes the continuing risk of exposure for workers and people living near the site, not only today but far into the future. Nuclear waste is found at hundreds of sites around the world, the product of a half century of nuclear energy production. The safe disposal of this waste is a major challenge for humanity. There are thorny ethical issues that should first be addressed. The risks are difficult to calibrate, because there is no such thing as a safe level of radiation exposure, certainly not for the type of radiation emanating from plutonium and uranium as present in Hanford. In the same vein, radiation exposure is not a one-off occurrence; it is the accumulation of radiation that has an impact on human health. The ethical questions are particularly problematic because the health impacts of exposure might only manifest themselves in humans after a very long time. The waste’s longevity poses a problem to many generations to come. The nuclear disaster areas around Chernobyl or Fukushima-Daiichi have become virtually permanently uninhabitable. The same goes for legacy sites such as Hanford, and also Sellafield in the UK. The legacy of nuclear waste is, however, larger than only military waste. There are currently no operational waste repositories for civilian nuclear waste. In Finland an underground repository is being built and Sweden has selected a site for to dispose of its waste, but they seem to be the exceptions. Other countries haven’t even started seriously considering underground disposal. Currently, a lot of civilian waste is simply kept in pools on reactor sites, awaiting final disposal underground. This poses tremendous safety and security risks. Even with the immediate concerns around human exposure and national security, nuclear waste management is essentially a problem of intergenerational justice. Present generations have enjoyed the lion’s share of the benefits of nuclear energy production, while future generations will be left footing the bill. We have a moral obligation to alleviate this burden by doing our fair share of the work needed to deal with waste. Our actions today (i.e. when, where, and how we dispose of this waste) will have implications for both near and distant future.

#### No effective strategies present to dispose of waste.

**Perkovich and Acton 09** (George Perkovich and James M. Acton; Perkovich is a vice president for studies at the Carnegie Endowment for International Peace and coauthor with James Acton of Abolishing Nuclear Weapons: A Debate, from which this op-ed is excerpted. Perkovich’s research focuses on nuclear strategy and nonproliferation, with a focus on South Asia and Iran, and on the problem of justice in the international political economy. He is the author of the award-winning book India’s Nuclear Bomb. James Acton holds the Jessica T. Mathews Chair and is co-director of the Nuclear Policy Program at the Carnegie Endowment for International Peace. A physicist by training, Acton’s current research focuses on the escalation risks of advanced conventional weapons. His work on this subject includes the Carnegie edited volume, Entanglement: Chinese and Russian Perspectives on Non-nuclear Weapons and Nuclear Risks, and a forthcoming article in the journal International Security. Acton’s publications span the field of nuclear policy.; 2009; “Abolishing Nuclear Weapons a debate”; <https://carnegieendowment.org/files/abolishing_nuclear_weapons_debate.pdf>; Carnegie Endowment for International Peace; accessed 12-11-2019; JHsu)

A disarmament treaty would probably require states to dispose of all the fissile material from dismantled weapons. HEU can be ‘denatured’ through down-blending—that is, mixing it with uranium of a lower enrichment to form low-enriched uranium (LEU), from which standard reactor fuel can be fabricated. This is a straightforward process. Indeed, following a 1993 agreement, Russia down-blends around 30 tonnes of HEU per year for sale to the US. There are two long-term options for disposing of excess plutonium: ‘immobilising’ it by burying it along with intensely radioactive nuclear waste, thereby making it extremely difficult to extract, or burning it in a civilian power reactor as mixed-oxide (MOX) fuel to generate electricity. Immobilisation technology is unproven, and a planned US immobilisation plant is at least ten years behind schedule. Although MOX fuel has been successfully fabricated and used in Europe for several years, MOX fuel plants in the US and Russia are also at least a decade behind schedule. Moreover, the US Department of Energy estimates that it will cost around $10 billion to build and operate plutonium-disposal facilities in the US (although this must be offset against the value of the fuel 60 | George Perkovich and James M. Acton thereby produced). Nevertheless, standard techniques exist for verifying the processing of fissile material. Whether such techniques are adequate is addressed in Chapter 3, where IAEA safeguards are discussed. Much of the fissile material listed in states’ declarations would not be available for verification. Substantial quantities have, for example, been used in nuclear detonations. Other material, such as that used in reactors, transformed by radioactive decay or lost in waste streams during processing, is extremely hard to verify with any accuracy. Moreover, much fissile material is held in classified form. Weapons pits, for instance, have classified shapes, masses and isotopic compositions, making it impossible for inspectors to verify the amount of material present in a pit (although, as discussed above, information about the isotopic composition and possibly mass of warheads could perhaps be declassified for inspection purposes). Similar limitations apply to naval reactor fuel. Under current rules, even material that was once in weapons but has now been converted into other forms is still sensitive, unless it has been blended in such a way as to hide its original isotopic composition. Whereas a national agency could verify all classified material, international inspectors could not (recall that information-barrier technology does not permit inspectors to measure the quantity of fissile material in a warhead). Thus, substantial amounts of the fissile material that states have produced would, for various reasons, be unavailable for verification. Inspectors would have to take on trust the inspected state’s claims about the whereabouts of this material. They would have no way of knowing that the material had not been diverted to a clandestine stockpile in violation of a disarmament agreement. This would not be a concern for national inspectors conducting an internal audit (such as the UK and US stocktakings described above), but it would concern international inspectors charged with verifying disarmament. Shown in the fourth row of Table 1 are very conservative estimates of the quantities of fissile material produced by the UK and the US that would be unavailable for verification, derived solely from estimates of material used in tests (as such material is impossible to verify).34 In practice, because of classification rules and the material that is made extremely hard to verify by process losses, use in a reactor, decay, or transportation abroad, these quantities would probably be a great deal larger. In short, substantial uncertainties in fissile-material inventories are unavoidable. Even with blameless intentions and honest accounting, such uncertainties would be on the order of at least a few per cent of production. Given that it is impossible to account for material to an accuracy anywhere near one nuclear weapon’s worth, states would need to take a decision

#### Fissile materials are costly, can’t be disposed of effectively, and allow for reproduction of nuclear arsenals.

**Tracy 18** (Cameron Tracy is an affiliate at Stanford University’s Center for International Security and Cooperation (CISAC) and a postdoctoral research fellow at its Department of Geological Sciences. His policy research focuses on strategies for the multilateral reduction of nuclear and chemical weapons stockpiles, as well as the safety and security of geologic repositories for nuclear waste.; updated December 17, 2018; “Defining Disarmament: The Challenge of Eliminating Fissile Materials”; <https://nuclearnetwork.csis.org/defining-disarmament-challenge-eliminating-fissile-materials/>; Next Generation Nuclear Network, accessed 12-12-2019; JHsu)

Calls for a world without nuclear weapons are common, even at the highest echelons of U.S. government. The United States unsuccessfully pitched this concept to the United Nations in 1946, and later served as a driving force behind international adoption of the 1968 Non-Proliferation Treaty (NPT), mandating the pursuit of nuclear disarmament.[1] More recently, this call was echoed by President Barack Obama, as well as former Secretaries of State and Defense.[2] Despite these lofty ambitions, progress has remained modest. Under a series of bilateral treaties, culminating in the 2010 New Strategic Arms Reduction Treaty (New START), the United States and Russia have removed from deployment thousands of nuclear warheads, delivery vehicles, and launchers.[3] However, these efforts have so far addressed only the low-hanging fruit of assembled weapons systems. While straightforward, this approach leaves intact the nuclear material that comprises the fundamental building block of a nuclear weapon. Elimination of this material is challenging. Thus, as disarmament proceeds from warheads and their accoutrements to these basic material ingredients, it will become more difficult. While such concerns may appear distant, their implications are key to current policy debates. Dissatisfied with the slow pace of disarmament, last year 122 United Nations member states voted in favor of a Treaty on the Prohibition of Nuclear Weapons (TPNW), vexing American policymakers who consider its requirement of rapid, complete disarmament to be unrealistic.[4] Opponents of this accelerated approach posit the difficulty of verification, the persistence of weapons design know-how, and the stabilizing effects of nuclear weaponry, but as the fundamental physical embodiment of nuclear armament, weapons material elimination stands at the crux of the matter. Both proponents of accelerated disarmament and those in favor of the conventional incremental approach would be wise to consider the challenges, feasibility, and permanence of the elimination of nuclear weapons materials. Disposal, destruction, and disarmament The most substantial steps towards global nuclear disarmament taken to date involve the dismantlement of assembled nuclear warheads. These consist, at their most basic level, of a package of conventional explosives that rapidly compress a mass of exotic material, so as to induce a nuclear chain reaction. Two solids, known as fissile materials, are used for this purpose: mined uranium that has been laboriously treated so as to enrich it in a specific isotope (highly enriched uranium or HEU), and plutonium that is synthesized during the irradiation of uranium-bearing fuel in a nuclear reactor. Warhead dismantlement involves separation of the components of these weapons (conventional explosives, fissile materials, etc.) and, in order to preclude reassembly, their subsequent destruction. The plutonium pit is the key component of a modern nuclear weapon, initiating a nuclear chain reaction when compressed by conventional chemical explosives. Additional components amplify the warhead’s explosive power. Image from the Union of Concerned Scientists. While conventional explosives, electronics, and the like are easily destroyed, fissile materials are another matter. Physical defacement has little effect on their potential for weaponization, as the expensive, time-consuming process of their synthesis is the limiting factor on weapons production, dwarfing the effort necessary to machine them into weapons components. They are composed of only a single chemical element (uranium or plutonium), so chemical processing is similarly ineffective, as no such treatment can change one element into another. Thus, it is these fissile materials, the foundation of nuclear weapon production, that represent the ultimate obstacle to achieving lasting, global nuclear disarmament. While this may appear intractable, the past several decades have seen substantial progress in the elimination of HEU stockpiles. This material is distinguished from readily-available, non-weaponizable natural uranium by its isotopic enrichment. Thus, it can be deweaponized by mixing it with large quantities of natural uranium. This process, known as downblending, renders it no more a threat than the uranium found abundantly in Earth’s crust and oceans. Elimination of plutonium is a more daunting task. The plutonium produced in nuclear reactors needs no isotopic alteration for use in a weapon, and non-weaponizable isotopes exist in such small quantities as to preclude downblending. Faced with the near-insurmountable cost and complexity of nuclear methods that completely destroy plutonium by converting it into another chemical element, a 1994 assessment by the US National Academy of Sciences (NAS) instead recommended methods that render plutonium more difficult to isolate and process.[5] The NAS was inspired in this endeavor by the large quantities of plutonium contained in civilian stocks of spent nuclear power plant fuel, which are protected from weaponization by their dilution in a soup of highly-radioactive elements. The study ultimately recommended two strategies for disposal: conversion to nuclear fuel by mixing with uranium dioxide and irradiation in a nuclear reactor, or intimate mixing with preexisting radioactive waste. Both were pursued by the United States as part of the 2000 Plutonium Management and Disposition Agreement (PMDA), a US-Russian reciprocal stockpile reduction scheme.[6] Mixing with radioactive waste was quickly abandoned as a cost saving measure and due to a lack of suitably large waste inventories. Efforts to convert plutonium to nuclear fuel continue, yet construction of the necessary conversion facilities has been plagued by decadal delays and severalfold increases in the projected cost.[7] Regardless, neither approach would drastically reduce the size of plutonium inventories. They would merely make it less easily obtainable. Even irradiation as fuel in a nuclear reactor would eliminate only a portion of incorporated plutonium, while additional plutonium would be bred by the uranium with which it is mixed. Having judged the fuel conversion approach economically infeasible, the United States’ current plans involve burial of plutonium in a geological repository, eschewing any radiation barrier to extraction. Recovery would be as simple as mining the fissile material. Advanced mining methods might even allow this to be accomplished clandestinely, making it difficult for the international community to detect and prevent nuclear rearmament.[8] This approach would leave the state possessing the geological repository with a route to acquiring plutonium that is potentially faster, cheaper, and less conspicuous than the conventional reactor-based route. A world without nuclear materials While all of the stockpile reduction efforts described above could superficially foster a world without nuclear weapons, they would not reduce global nuclear risk to the level extant prior to the advent of nuclear weaponry, as none serve to irreversibly eliminate plutonium stockpiles. That said, there does exist one nuclear reactor-based method which could effectively destroy plutonium by converting it to a mixture of non-weaponizable elements without simultaneous production of additional plutonium. This approach mirrors the fuel conversion strategy described above, but substitutes the uranium dioxide dilutant with a more inert material that does not breed plutonium when irradiated. Irradiation of this inert matrix fuel (IMF) in an advanced nuclear reactor could consume roughly 80% of the plutonium it contained. [9] The remaining plutonium could afterwards be recycled into fresh IMF fuel for further irradiation. Yet even this approach involves uncertainty and risk. IMFs and the advanced nuclear reactors in which they would work best are largely unproven technologies that would require long development periods and massive investment. The extensive transport and handling of plutonium necessitated by this approach wouLat

### Re-Arm

#### Rearm guts aff solvency and turns the case

Ulgen ‘15 – chairman of the Istanbul-based think tank EDAM and a visiting scholar at Carnegie Europe. He has served in the Turkish foreign service in several capacities and was among the international security experts tasked by NATO Secretary-General Anders Fogh Rasmussen with reporting on the transatlantic relationship in advance of NATO’s September 2014 summit. His research focuses on nuclear policy, the implications of Turkish foreign policy for Europe and the United States, and the security and economic aspects of transatlantic relations. He is co-author of The European Transformation of Modern Turkey [Sinan Ulgen (2015) Is “zero” the right target for disarmament?, Bulletin of the Atomic Scientists, 71:1, 95-97, DOI: 10.1177/0096340214563688]

Second, how would a world without nuclear weapons be managed? If the world were essentially one big “peace cartel,” this cartel would be very fragile indeed. Economic theory indicates that members of a cartel become more likely to engage in cartel-busting behavior as the rewards for doing so increase and the penalties decrease. A similar logic would pertain where nuclear weapons are concerned. In a world without nuclear weapons, breaking one’s cartel commitments by developing a nuclear deterrent would seem to have enormous security benefits. As for penalties, nothing short of a sanctioned military attack intended to destroy the country in question would change the calculus of a rogue regime intent on acquiring nuclear weapons. In other words, ensuring that the world remained free of nuclear weapons would require the establishment of a universal regime devoted to that purpose, backed by the unambiguously credible use of force. The world has never witnessed the emergence of such an institution, and likely never will. When the first rogue state went nuclear, the nonproliferation regime would likely fall apart completely. Today, though the regime is not universal, it remains effective in constraining the nuclear ambitions of nations such as Iran. But in a world without the security that nuclear weapons provide, a single episode of noncompliance would likely cause many nations to seek their own deterrents. The result would be a collapse of the regime and a cascade of proliferation. It is a dangerous fallacy to believe that rogue states could be prevented from reintroducing nuclear weapons to a world from which these weapons had been eliminated.

### Disarmament Bad

#### Disarmament is ridiculously expensive and increases the risk of plutonium proliferation – causes circumvention and makes the process entirely unverifiable.

**Alger and Findlay 09** [Justin Alger and Trevor Findlay, () "The Costs of Nuclear Disarmament" International Commission on Nuclear  Non‐proliferation and Disarmament, September 2009, http://www.icnnd.org/Documents/Alger\_Findlay\_Cost\_of\_Disarmament.pdf, DOA:12-5-2019 // WHSRS]

An important and inevitably expensive part of the disarmament process will be the disposition of the fissile materials used in nuclear devices, notably HEU and plutonium.22 HEU can be down-blended to low-enriched uranium (LEU) and used in a power reactor, so the solution in the case of uranium weapons is obvious. Indeed the US/Russian Megatons to Megawatts program is already disposing of surplus former Soviet HEU in this way. The US purchases the material, thereby offsetting to some extent the past cost of production and of its removal from Soviet nuclear weapons. Under a complete nuclear disarmament regime such use of HEU could be said to offset some of the costs of disarmament, although the economic benefit of using Tritiumisalsoessentialtomodernnuclearweaponsbutisnotofsuchconcernintermsof dispositionsinceithasahalf**‐**lifeofonly12.3years. 10 downblended HEU in power reactors is zero compared with using natural uranium or LEU produced directly. Nonetheless there is an incalculable nonproliferation benefit in removing as much HEU from circulation as possible. Plutonium disposition, in large part because there is still great uncertainty about it, is more challenging and hence the costs less easily calculable. The options for plutonium disposition are numerous and vary significantly in their costs, but all are expensive. Schwartz et al estimated the cost of several plutonium disposition options, the more likely of which are examined below. 23 Disposition option Cost estimate for disposition of 50 metric tons of plutonium (2008 USD) New burner reactors $8.2 billion Convert to MOX then use in existing light-water reactors (LWR) $425 million24 (requires MOX facility) Converted to MOX then used in dedicated advanced light-water reactor $4.5 billion to $7.8 billion (requires MOX facility) Vitrification with fission products $1.4 billion (maximum) According to the Global Fissile Material Report 2008 there is currently a global total of 500 tons of plutonium, about half of which is military. 25 Plutonium disposition looks to be one of the more costly steps of nuclear disarmament, but not unreasonably so given the benefits of a world potentially free of separated plutonium and its associated proliferation risks. There is, indeed, a danger that states with plutonium stockpiles from dismantled weapons will come to see the material as a resource that is of use in fast breeder reactors which breed more plutonium than they consume. This would increase the amount of plutonium worldwide, creating greater proliferation risks as well as increasing the costs of verifying that such plutonium was not being diverted to military uses. In addition, the economics of fast breeder reactors and the so-called plutonium economy have always been questionable.26 The cheapest option in the long term is therefore likely to be vitrification with fission products to make the plutonium unusable for nuclear weapons, followed by long-term deposition in deep geological repositories. Such deep geological repositories are expensive, but states with nuclear energy programs are already seeking to build them for disposing of high-level nuclear waste from nuclear power plants, so the costs will be partly met by countries’ civilian nuclear energy sectors. In the US military nuclear waste is already deposited in a geological repository just outside of Carlsbad, New Mexico. Currently work on its proposed Yucca Mountain facility for civilian nuclear waste is suspended pending a resolution of the entire issue of what to do with such waste, even though nuclear utilities have for years been contributing to a fund for such purposes. In 2008 the US Department of Energy (DOE) increased the lifetime cost estimate for the proposed Yucca Mountain facility in Nevada to $98.5 billion, up 43 percent from its previous estimate in 2001 of $68.8 billion.27 There may be political controversy in the Western nuclear weapon states about using a civilian facility for military high-level nuclear waste, necessitating the construction of a separate one. Currently experience with long-term deep geological waste sites is limited. Only Finland and Sweden are close to constructing one and France and the UK are investigating them (for civilian nuclear waste). Since the facilities for military and civilian waste are identical, the experience in building and operating the latter will be applicable to military sites and could result in industrial learning and cost savings over time. No information is available about the arrangements for storing and disposing of nuclear weapons production waste and excess fissionable material in China, India, Israel, North Korea and Pakistan, or the costs involved. Other considerations in assessing the cost of disarmament Variability of costs How much the nuclear disarmament process costs will vary country by country. The older nuclear weapon states’ arsenals and delivery systems have been cut dramatically since the end of the Cold War, notably those of the US and Russia, but also those of France and the UK. These states are better equipped to dismantle their nuclear weapons more cost effectively because they already have experience in doing so, along with the necessary facilities. In addition such states already had experience in dismantling older redundant first generation nuclear weapon systems that were replaced in their entirety. In a sense such states have already experienced the process and borne the costs of what would have been complete nuclear disarmament had they not replaced the old systems with new ones. States with smaller nuclear arsenals that have remained relatively constant or have grown since they were first deployed―those of India, Israel, North Korea and Pakistan―are in a different situation, as may be China. Dismantlement facilities are expensive, so states with historically static nuclear arsenals that have not required such facilities will be at a comparative disadvantage when the time comes for dismantlement and disposition. There are, however, options for multilateral cooperation, including financial assistance to these states. Weapon life cycles For the older, more sophisticated nuclear weapon states, the weapon life cycle concept is critical to understanding what marginal costs may be accurately attributable to disarmament versus what are appropriately attributable to the construction, maintenance, dismantlement and disposition of nuclear weapons and their delivery systems in their normal life cycle. The US and the Soviet Union went through several generations of nuclear weapons and delivery systems before the end of the Cold War halted their nuclear arms race. The dismantlement and destruction of retired weapons, as well as the costs of environmental clean-up associated with them should not be considered costs of disarmament. Rather these are costs of armament as they are a normal part of weapon life cycles incurred irrespective of arms control agreements or other disarmament initiatives. These costs should normally be amortized over the lifetime of the weapon system’s deployment. There are a large number of warheads in reserve or in retirement yet to be dismantled as a result of previous arms control agreements that will also need to be dismantled. The costs of doing so are, however, legacy costs that should also be attributed to weapon life cycles and not disarmament. Costs of verifiability and speed If an agreement requires that weapons are dismantled and destroyed in a particular way so that the process is verifiable—as was the case with START I and the INF agreement, for example—those costs are properly attributed to disarmament.28 Another consideration in costing nuclear disarmament is how quickly it is expected to proceed. Urgency is not without a price. If rapid progress is expected, the costs are substantially higher than if the process is drawn out over several decades. Not only do total costs increase as a result of the demand for larger dismantlement capabilities and storage requirements, but the short-term financial burden placed on states is more difficult to bear than if the process were more gradual. Any costs associated with dismantling weapons sooner than their normal life cycles would dictate should be attributed to nuclear disarmament. The question that should be asked when determining if a cost is attributable to a weapon life cycle or disarmament is thus ‘would the cost be incurred in the absence of a disarmament initiative?’

### Fluid Threats

#### Threats are fluid and change – losing nuclear responsiveness crushes a key aspect that keeps other unstable countries from going nuclear. Disarmament is uniquely worse – it emboldens other countries and drives other countries to get their own weapons and incentivizes circumvention – turns case.

**Costlow 15** [Matthew R., () "The costs of nuclear disarmament" TheHill, 3-26-2015, https://thehill.com/blogs/congress-blog/homeland-security/236940-the-costs-of-nuclear-disarmament, DOA:12-4-2019 // WHSRS]

In fact, the policy of nuclear disarmament may end up costing the United States more in the long run than if it continues current modernization plans. U.S. nuclear weapons play a very important and cost-effective role in the current strategic environment by [**assuring**](http://www.msz.gov.pl/en/news/mfa_statement_on_information_about_russia_s_non_compliance_with_the_inf_treaty) our NATO allies in the face of Russian aggression and permitting allies such as South Korea and Japan, who fear Chinese and North Korean threats, to remain non-nuclear. Cutting the U.S. nuclear arsenal further would likely embolden Russia and China, damage relations with allies, and drive allies to examine obtaining nuclear weapons themselves. These are costly possibilities indeed. Also, the nuclear delivery systems we are investing in retain enormous value as a hedge against an uncertain and unknowable future. Some of the systems the United States is developing will be expected to operate effectively into the 2080s, 65 years from now. By claiming that the United States should make further deep and “irreversible” cuts in the U.S. nuclear arsenal, nuclear disarmers show they are willing to hamstring U.S. capabilities for decades on the assumption of a benign future they cannot possibly foresee accurately. Threats against the United Sates change frequently both in scope and severity, and often unexpectedly. If the United States were to make further deep cuts, it could be ill-equipped at best when new threats emerge. Modifying existing nuclear systems to meet new threats would take a good deal of time and be enormously expensive. If modifying existing systems proves unworkable, purchasing whole new systems rapidly as a supplement to meet a future threat would likely be infeasible or, again, extremely costly. As anyone in the defense acquisition business knows, timelines of major defense projects are often measured not in years, but in decades. Unfortunately world events often unfold much faster than the defense community can anticipate or plan for. As such, it is prudent for the United States to invest in nuclear capabilities that are flexible and resilient in a fluid threat environment. That is precisely what the administration is requesting. This is where the greatest value of a modernized U.S. nuclear arsenal lies. It would adapt as necessary to shifting threats. And if built with an eye toward the future, U.S. nuclear forces may be able to integrate the new technology that will inevitably arrive in the next 65 years. By continuing to invest in nuclear weapons and their delivery systems, the United States is demonstrating a clear understanding of the value they provide in both deterring enemies and assuring allies in an unpredictable, dangerous world. In a time of restricted budgets and scarce resources, Congress should prioritize those programs that provide the greatest value in the defense of the United States against the most serious threats, now and in the future. A modernized U.S. nuclear arsenal meets those requirements and is worth the very small portion of the Defense budget required.

### Kant

#### 1] The prohibition cannot be fairly applied because the object itself cannot be intrinsically bad, but only its application and usage – the usage and fair distribution can’t generate a prohibition.

#### 2] Nuclear armament is a state’s right to self-defense – it’s universalizable since all states can carry out deterrent threats.

Doyle 10 Doyle, Thomas E. “Kantian nonideal theory and nuclear proliferation.” International Theory, 2:1, 87–112 & Cambridge University Press, 2010. Scarsdale CC

The same analysis applies to any policy of carrying out deterrent threats solely against population/government centers. However, for Aspirant **to carry out deterrent threats** solely against military centers **seems prima facie consistent with Kant’s view on the right of national defense**, and it parallels some applications of just war theory on the problem of limited nuclear warfighting (Ramsey, 1962; Orend, 2000). Once acquired, a lowyield nuclear device might annihilate one or more of Rival’s army divisions, naval task forces, or air-force bases, severely crippling its capacity to continue to aggress. More importantly, **a maxim that corresponds to this intention appears to pass the universality test. Aspirant could** in principle **assent to a rule that permits all nuclear-armed states to** threaten and **carry out** exclusively **counterforce nuclear reprisals**, much in the same way that nationalist morality permits all states to use conventional force in selfdefense.23 This isn’t to say that Rival can read off Aspirant’s intentions from its nuclear procurement behavior. And this is not to say that in the process of nuclear miniaturization required to produce these weapons that Aspirant might not retain its larger nuclear devices. It is to say, though, that **Aspirant’s maxim on this point can be imagined without formal contradiction**. Moreover, were Aspirant to miniaturize its arsenal and then verifiably decommission or destroy its larger devices, Rival might come to behave that Aspirant had abandoned any policy of mutually assured destruction in favor of a policy of severely limited counterforce warfare.

#### 3] Nuclear arsenals reduce the military budget and taxation.

Maximus ’16 Maximus, Nullus. “The Libertarian Case For Private Nuclear Weapons.” The Zeroth Position, 30 June 2016, <https://www.zerothposition.com/2016/06/30/the-libertarian-case-for-private-nuclear-weapons/>. [Premier]

As a corollary of the first point, possessing nuclear weapons allows one to spend less resources on maintaining conventional military forces, thus freeing up resources to be used for other purposes. Just as the United States has generally lowered its military budget as a percent of GDP since nuclear weapons were invented (with a few exceptions for wars), a private defense agency can also lower costs by maintaining a small number of nuclear missiles rather than a much more numerous conventional arsenal. This also means that military equipment providers will have less influence over the society than they otherwise would, thus lessening the likelihood that they can start a conflict for their own profiteering.

#### 4] Hostage holding is wrong –

A] nuclear weapons are used for state defense not to hold other countries hostage – false assumption that isn’t a priori true

B] no intention to use means no hostage holding

## 1NC – Defense

### AT Warhead Ambiguity

#### No warhead ambiguity—existing measures and rationality check

Acton PhD 13 [Theoretical Physics from Cambridge, member of the Trilateral Commission on Challenges to Deep Cuts and was co-chair of the Next Generation Working Group on U.S.-Russian Arms Control, senior associate of the Nuclear Policy Program at the Carnegie Endowment for International Peace] “Silver Bullet? Asking the Right Questions About Conventional Prompt Global Strike” Carnegie Endowment for International Peace, 2013 RE

Arguing that the relative risk of warhead ambiguity would be greater in the event of attacks on Russia or China than on third parties does not, of course, speak to the absolute risk of either scenario. It is here that the debate really starts. The National Research Council reached the conclusion that, in any scenario, “the risk of the observing nation’s launching a nuclear retaliatory attack is very low.”11 The NRC, as well as analysts who agree with its conclusion, advances two basic arguments. First, because of missiles tests and space launches, Russia already has procedures in place for “detecting and monitoring missiles and rockets after launch to establish their trajectories.”12 Such launches include SLBM tests from operational submarines that the United States and Russia have conducted for more than fifty years without incident (assisted by a bilateral ballistic missile launch notification agreement since 1988). The procedures developed to monitor these launches would probably ensure that Russia does not mistake a CPGS launch against a third state as a launch against Russia. Second, even if Russia—or China in the future—reached the incorrect conclusion that a nuclear attack on them was under way, the fear of nuclear escalation would create strong incentives to act extremely cautiously.13 In particular, the NRC points out that since any CPGS attack would be relatively small,

### AT Prolif

#### No impact to nuclear proliferation—more nuclear states produce peace

Suzuki 15 – (June 2015, Akisato, Researcher, Institute for International Conflict Resolution and Reconstruction, School of Law and Government, Dublin City University, MA in Violence, Terrorism and Security at Queen's University, “Is more better or worse? New empirics on nuclear proliferation and interstate conflict by Random Forests,” Research and Politics, SagePub)

Random Forests has three attractive and distinctive characteristics for the purposes of this paper: first, the estimation of conditional variable importance and partial dependence plots enable conventional applied researchers to interpret non-parametric analysis in an intuitive way; second, Random Forests can examine non-linearity (Strobl et al., 2009: 339–341), which is desirable because, as already noted, some theories expect non-linearity between nuclear proliferation and a systemic propensity for conflict; and finally, it can cope with potential interactions and multicollinearity between regressors (Strobl et al., 2009: 339–341; Strobl et al., 2008). As noted before, most of the regressors here are highly correlated, and also it is plausible to anticipate some interaction effect between them (e.g. the number of democratic states and the gross world product). The specific capabilities of Random Forests are therefore essential. The estimation of conditional variable importance shows that the nuclear year counter has a negative importance score.7 Thus, the nuclear year counter is not important in explaining the dispute–state ratio. This suggests that the optimist theory is supported. The remaining regressors have an importance score higher than the absolute value of the importance score of the nuclear year counter, meaning that they are all important. Controlling for democratic peace, capitalist peace, and polarity, the number of nuclear states is still a significant predictor in explaining a systemic propensity for interstate conflict. Figure 1 presents the partial dependence plots of the model.8 First, on average, a larger number of nuclear states is associated with a lower dispute–state ratio, although the changes from two nuclear states to three and from six to seven increase the ratio instead. Thus, the relationship is empirically non-linear, as Bueno de Mesquita and Riker (1982) and Intriligator and Brito (1981) expected in part. Overall, however, the optimist theory is supported, and the change from two nuclear states to nine nuclear states decreases the dispute–state ratio approximately from 0.228 to 0.18. This means that, if there are 194 states in the system (as there were in 2009), the number of militarized interstate dispute onsets per system-year decreases approximately from 44 to 35. This is a substantively significant decline. Second, the nuclear year counter shows a concave relationship with the dispute–state ratio, suggesting that new nuclear states are less prone to conflict than middle-aged nuclear states. Thus, the pessimist theory finds no support from either the variable importance estimation or the partial dependence plot. Finally, as for the control variables, the number of democratic states and the gross world product have a complex non-linear relationship with the dispute–state ratio, but if the number of democratic states and the gross world product are sufficiently large, they tend to decrease the dispute–state ratio. Their substantive effects are also significant, though not as much as the number of nuclear states. When comparing the effect of their lowest and highest values (23 and 94 in the number of democratic states and 7 and 71.2 in the gross world product), the number of democratic states decreases the number of militarized interstate dispute onsets per system-year approximately from 40 to 37, and the gross world product from 44 to 37. Unipolarity is also associated with a decline in the dispute–state ratio, suggesting that unipolarity is better than bipolarity in terms of a systemic propensity for interstate conflict; however, its effect is negligible, as it reduces the number of militarized interstate dispute onsets per system-year from 39 to 38. One caveat is, as explained in the online appendix, that the results of the number of democratic states and unipolarity are significantly sensitive to a parameter setting. Thus, these predictors are less robust, and the aforementioned points about them should be treated with caution. Discussion and concluding remarks The main findings reveal that the optimist expectation of the relationship between nuclear proliferation and interstate conflict is empirically supported:9 first, a larger number of nuclear states on average decreases the systemic propensity for interstate conflict; and second, there is no clear evidence that the emergence of new nuclear states increases the systemic propensity for interstate conflict. Gartzke and Jo (2009) argue that nuclear weapons themselves have no exogenous effect on the probability of conflict, because when a state is engaged in or expects to engage in conflict, it may develop nuclear weapons to keep fighting, or to prepare for, that conflict. If this selection effect existed, the analysis should overestimate the conflict-provoking effect of nuclear proliferation in the above model. Still, the results indicate that a larger number of nuclear states are associated with fewer disputes in the system. This conclusion, however, raises questions about how to reconcile this study’s findings with those of a recent quantitative dyadic-level study (Bell and Miller, 2015). The current paper finds that nuclear proliferation decreases the systemic propensity for interstate conflict, while Bell and Miller (2015) find that nuclear symmetry has no significant effect on dyadic conflict, but that nuclear asymmetry is associated with a higher probability of dyadic conflict. It is possible that nuclear proliferation decreases conflict through the conflict-mitigating effects of extended nuclear deterrence and/or fear of nuclear states’ intervention, to the extent that these effects overwhelm the conflict-provoking effect of nuclear–asymmetrical dyads. Thus, dyadic-level empirics cannot solely be relied on to infer causal links between nuclear proliferation and a systemic propensity for conflict. The systemic-level empirics deserve attention.

#### No prolif impact

Mueller 17 (John Mueller, Professor of Political Science at The Ohio State University & Senior Fellow at the Cato Institute & Senior Research Scientist with the Mershon Center for International Security Studies at Ohio State University "76. Nuclear Weapons: Proliferation and Terrorism" https://object.cato.org/sites/cato.org/files/serials/files/cato-handbook-policymakers/2017/2/cato-handbook-for-policymakers-8th-edition-76\_0.pdf)

Except for their effects on agonies, obsessions, rhetoric, posturing, and spending, the consequences of nuclear proliferation have been largely benign: those who have acquired the weapons have “used” them simply to stoke their egos or to deter real or imagined threats. For the most part, nuclear powers have found the weapons to be a notable waste of time, money, effort, and scientific talent. They have quietly kept the weapons in storage and haven’t even found much benefit in rattling them from time to time. If the recent efforts to keep Iran from obtaining nuclear weapons have been successful, those efforts have done Iran a favor. There has never been a militarily compelling reason to use nuclear weapons, particularly because it has not been possible to identify suitable targets—or targets that couldn’t be attacked as effectively by conventional munitions. Conceivably, conditions exist under which nuclear weapons could serve a deterrent function, but there is little reason to suspect that they have been necessary to deter war thus far, even during the Cold War. The main Cold War contestants have never believed that a repetition of World War II, whether embellished by nuclear weapons or not, is remotely in their interests. Moreover, the weapons have not proved to be crucial status symbols. How much more status would Japan have if it possessed nuclear weapons? Would anybody pay a great deal more attention to Britain or France if their arsenals held 5,000 nuclear weapons, or much less if they had none? Did China need nuclear weapons to impress the world with its economic growth or its Olympics? Those considerations help explain why alarmists have been wrong for decades about the pace of nuclear proliferation. Most famously, in the 1960s, President John Kennedy anticipated that in another decade “fifteen or twenty or twenty-five nations may have these weapons.” Yet, of the dozens of technologically capable countries that have considered obtaining nuclear arsenals, very few have done so. Insofar as most leaders of most countries (even rogue ones) have considered acquiring the weapons, they have come to appreciate several drawbacks of doing so: nuclear weapons are dangerous, costly, and likely to rile the neighbors. Moreover, as the University of Southern California’s Jacques Hymans has demonstrated, the weapons have also been exceedingly difficult for administratively dysfunctional countries to obtain—it took decades for North Korea and Pakistan to do so. In consequence, alarmist predictions about proliferation chains, cascades, dominoes, waves, avalanches, epidemics, and points of no return have proved faulty. Although proliferation has so far had little consequence, that is not because the only countries to get nuclear weapons have had rational leaders. Large, important countries that acquired the bomb were run at the time by unchallenged—perhaps certifiably deranged—monsters. Consider Joseph Stalin, who, in 1949, was planning to change the climate of the Soviet Union by planting a lot of trees, and Mao Zedong, who, in 1964, had just carried out a bizarre social experiment that resulted in an artificial famine in which tens of millions of Chinese perished. Some also fear that a country might use its nuclear weapons to “dominate” its area. That argument was used with dramatic urgency before 2003 when Saddam Hussein supposedly posed great danger, and it has been frequently applied to Iran. Exactly how that domination is to be carried out is never made clear. The notion, apparently, is this: should an atomic rogue state rattle the occasional rocket, other countries in the area, suitably intimidated, would bow to its demands. Far more likely, threatened states would make common cause with each other and with other concerned countries (including nuclear ones) against the threatening neighbor. That is how countries coalesced into an alliance of convenience to oppose Iraq’s region-threatening invasion of Kuwait in 1990. Yet another concern has been that the weapons will go off, by accident or miscalculation, devastating the planet in the process: the weapons exist in the thousands, sooner or later one or more of them will inevitably go off. But those prognostications have now failed to deliver for 70 years. That time period suggests something more than luck is operating. Moreover, the notion that if one nuclear weapon goes off in one place, the world will necessarily be plunged into thermonuclear cataclysm should remain in the domain of Hollywood scriptwriters.

### AT ICBMs Bad

#### Zero risk of accidents---ICBMs increase decision-time.

Dr. Peter Huessy 17. President of GeoStrategic Analysis; Director of Strategic Deterrent Studies at the Mitchell Institute for Aerospace Studies; 20 years, the senior defense consultant at the National Defense University Foundation. “The Requirement for a Nuclear Triad: Strategic Stability and the Critical Value of America’s ICBMs.” Real Clear Defense. 1/10/2017. https://www.realcleardefense.com/articles/2017/01/11/strategic\_stability\_and\_the\_critical\_value\_of\_americas\_icbms\_110614.html.

Given the obvious dangers of eliminating Minuteman, why do ICBM critics persist in proposing to do so? Two reasons are being put forward in addition to “saving money” and supposedly “stopping the arms race.” We are told the ICBMs are accident prone—on a “hair trigger”-- and in a crisis might be recklessly used. What are the facts?¶ In the early 1980’s, a wrench was accidentally dropped in a Titan ICBM missile silo. It bounced off the concrete floor and punctured the skin of the Titan missile. This caused a liquid fuel leak. Subsequently, the fuel tank exploded. Although there was no release of any nuclear material, and the nuclear warhead remained intact and inactive, a recent television documentary raises the specter of how a very large megaton warhead on top of such a missile could have been accidentally detonated.¶ The case, as interesting and tragic as it was, is irrelevant to the currently deployed solid rocket motor Minuteman ICBM force. The 400 Minuteman missiles operationally deployed are all solid fueled rockets. The possibility of any accident similar to the Titan event is zero—simply impossible. Solid fuel does not “leak” nor can it be ignited due to the lining or skin of the missile being punctured.¶ In short, the concern in the new documentary about the Titan explosion [“Command and Control”] brought to us by PBS is completely irrelevant when applied to the current Minuteman ICBM. It is irrelevant to the force at large because we have no liquid-fueled ICBMs or SLBMs, and all liquid-fueled Titan missiles were retired decades ago.¶ The other asserted danger cited by critics of our nuclear deterrent has to do with a supposed technological deficiency of our nuclear command and control system. If true, it would apply to all three legs of our Triad.¶ It involves two aspects of what is allegedly the same problem: false warning of an attack on our country, including our missile silos, submarine and bomber bases; and a President being pressured to launch our weapons before they are destroyed thinking we are under attack. Both concerns are without merit. Here is why.¶ In 1980, a training tape was placed into a computer at NORAD, the North American command center that continuously monitors for ballistic missiles launched at the United States. The training tape warning simulated the launch of 200 missiles from the Soviet Union at the United States.¶ I know a number of ICBM launch officers who were on duty at exactly that time. They acknowledge that the ICBM crews were placed on a higher alert level, as were other nuclear forces, in complete accord with their extensive training. However, no order was ever given at any time to launch any U.S. nuclear weapon. ¶ In fact, in less than 20 minutes, due to the comprehensiveness of NORAD training through precisely executed disciplined processes, the leadership on duty was able to determine the “data” indicating a Russian ICBM launch on the United States was false. That disciplined process, still in place today, immediately determined the cause of the false warning and allowed nuclear forces to return to normal day-to-day alert levels.¶ Since that day in 1980, no such additional “training tape” incident has occurred. In fact, procedures were changed ensuring that there could not be any future possibility of this type of erroneous data dissemination. In fact, our missile defense development efforts have greatly improved our attack warning and assessment capabilities to where false warning of a missile attack just will not happen again.¶ What about the second supposed ICBM fault line? Are the missiles prone to automatic launch in a crisis due to computer warnings? And are critics correct that it is U.S. deterrent policy to launch our missiles automatically if we receive computer warning of a missile attack, such as the training tape we referenced earlier? There are no facts to corroborate this fallacious assertion because the U.S. has no such policy of launch on computer warning and has never had such a policy.¶ In November 1997, the senior nuclear expert on the National Security Council, Mr. Robert Bell, held a news conference. He explained that some media reports had erroneously concluded that the Clinton administration’s recent Nuclear Posture Review (NPR) had supposedly adopted a deterrent policy requiring the U.S. to launch our missiles on warning of an attack.¶ Robert Bell was adamant that the policy of the U.S. at that time, before, and after the Administration’s NPR, was NOT to launch our nuclear weapons on warning of an attack, or even if an attack was confirmed.¶ Robert Bell explained the United States posture was such that no President would be under time pressure to launch nuclear weapons even if it was confirmed the United States had been attacked with nuclear weapons that had detonated on U.S. soil.¶ Robert Bell further explained why this was the case. The U.S. chooses to sustain and operate a Triad of three independently survivable nuclear forces. The entire nuclear deterrent is designed thus, so no U.S. President has to promptly or inadvertently launch any nuclear weapons during a crisis.

### AT Trump Kills Alliance

#### Allies perceive current commitments as credible.

Heritage 18. “U.S. Nuclear Weapons Capability.” The Heritage Foundation. 10/4/2018. <https://www.heritage.org/sites/default/files/2018-09/2019_IndexOfUSMilitaryStrength_ASSESSMENT_POWER_NUCLEAR.pdf>

Allied Assurance Score: Strong The number of weapons held by U.S. allies is an important element when speaking about the credibility of America’s extended deterrence. Allies that already have nuclear weapons can coordinate action with other powers or act independently. During the Cold War, the U.S. and the U.K. cooperated to the point where joint targeting was included.39 France maintains its own independent nuclear arsenal, partly as a hedge against the uncertainty of American credibility. The U.S. also deploys nuclear gravity bombs in Europe as a visible manifestation of its commitment to its NATO allies. The U.S., however, must also concern itself with its Asian allies. The United States provides nuclear assurances to Japan and South Korea, both of which are technologically advanced industrial economies facing nuclear-armed adversaries and potential adversaries. If they do not perceive U.S. assurances and guarantees as credible, they have the capability and know-how to build their own nuclear weapons and to do so quickly. That would be a major setback for U.S. nonproliferation policies. The 2018 NPR takes a step in a good direction when it places “[a]ssurance of allies and partners” second on its list of four “critical roles” (immediately following “[d]eterrence of nuclear and non-nuclear attack”) that nuclear forces play in America’s national security strategy. The 2018 NPR proposes two supplements to existing capabilities—a low-yield SLBM warhead and a new nuclear sea-launched cruise missile—as important initiatives that act to strengthen assurance along with the Obama and Trump Administrations’ initiatives to bolster conventional forces in NATO.40 Grade: At this time, most U.S. allies are not seriously considering developing their own nuclear weapons. European members of NATO continue to express their commitment to and appreciation of NATO as a nuclear alliance. Doubts about the modernization of dual-capable aircraft and even about the weapons themselves, as well as NATO’s lack of attention to the nuclear mission and its intellectual underpinning, preclude assigning a score of “very strong.” An unequivocal articulation of U.S. commitment to extended deterrence leads to an improvement in this year’s score, raising it to “strong.”

#### And, media bias makes all their cards suspect – Trump has sufficiently committed to allies

Bilahari Kausikan 18, retired Singaporean senior diplomat, formerly Ambassador-at-Large and Policy Advisor at Singapore's Ministry of Foreign Affairs, "America's retreat from the world is greatly exaggerated", Nikkei Asian Review, https://asia.nikkei.com/Politics/Bilahari-Kausikan-America-s-retreat-from-the-world-is-greatly-exaggerated

U.S. President Donald Trump is often portrayed as retreating from global leadership and paving the way for China's unstoppable rise under President Xi Jinping. The reality is more complex. By emphasizing Trump's alleged withdrawal, much of the mainstream liberal U.S. media are unwittingly undermining confidence in America as much as does China's Communist Party propaganda. The shared sentiment is that the U.S. has become more unreliable under Trump, and that America is the past and China is the future. This is a superficially persuasive argument. But it does not stand up to close examination. The U.S. president remains the only world leader who can still say -- as he did in his State of the Union speech -- that "unmatched power is the surest means of our defense." He is right. Nobody else, including Xi, can make such a claim. It cannot be denied that the Chinese political system is better able to consistently pursue long-term goals than the U.S. political system, which is subject to disruptions every election cycle. But it is not as if the Chinese system has been immune to major disruptions since 1949, such as the Great Leap Forward and the Cultural Revolution. Xi's concentration of power and shift away from collective leadership potentially creates a single point of failure. We should not forget it was the so-called unreliable American system that put in place and maintained international order over many decades. We should not let anti-Trump prejudices in the U.S. or Trump's outsize personality exaggerate the extent of discontinuity his administration represents. The Trump administration's National Security Strategy (NSS 2017) released in December is a largely mainstream document that makes clear the Trump administration has not eschewed leadership or disavowed the current order, but has a narrower concept of leadership that puts "America first" and stresses a more robust approach to competitors. Some might not like this concept of leadership. But it cannot be called a retreat. NSS 2017 makes clear that the current administration will return to the long-standing U.S. posture of "peace through strength." If we examine the Trump administration's record in East Asia, it represents in many respects a reversion to the norm of U.S. policy. Like his predecessors, Trump has placed priority on relations with China, but unlike Barack Obama, who naively downplayed competition in the hope it would make the Chinese more cooperative, Trump has emphasized both aspects of the relationship. Trump has also reaffirmed U.S. alliances with Japan, South Korea and Australia. There is no sign his administration will let China's claims in the East and South China seas go unchallenged.

#### Trump just creates a brink – countries are still sticking with the US alliance now – but they’re becoming increasingly wary

Stewart Patrick 18, James H. Binger senior fellow in global governance at the Council on Foreign Relations, “How U.S. Allies Are Adapting to "America First"”, https://www.foreignaffairs.com/articles/world/2018-01-23/how-us-allies-are-adapting-america-first

At the dawn of the administration of U.S. President Donald Trump, I predicted in Foreign Affairs that Trump’s “America first” agenda would set in motion tectonic forces beyond his control. As the ground shifted beneath their feet, longtime U.S. allies would lose confidence in U.S. leadership and credibility. They would adapt by hedging their bets, moving away from alignment with a United States no longer willing to promote and defend the liberal world order that it had sustained since 1945. The evidence for this hedging would be in adjustments by U.S. allies to their approaches toward geopolitics, economics, and climate change. One year after Trump’s inauguration, the liberal order has not collapsed. But it is in distress as the president turns his back on the world the United States made to embrace a nationalist and isolationist foreign policy. Although they still hope that Trump’s abdication of global leadership is a temporary aberration rather than a lasting inflection point, U.S. allies and partners are making contingency plans. SAFE EUROPEAN HOME The tendency toward hedging is most marked in transatlantic relations, the bedrock of the post-1945 liberal order. At NATO’s Brussels summit in May, Trump rattled Europeans by suggesting that his country’s commitment to the alliance was contingent on their reimbursing American taxpayers for U.S. military expenditures while declining to endorse Article 5 of the North Atlantic Treaty, which covers collective defense. Although he belatedly affirmed the United States’ commitments two months later, Europeans got the message. “The times in which we can fully count on others are somewhat over, as I have experienced in the past few days,” German Chancellor Angela Merkel said after the Brussels summit. Europeans have hardly abandoned the Western alliance, but Trump’s unpredictability is spurring them to take greater responsibility for their own defense. In June, EU member states launched a new European Defense Fund, promising to increase their own defense spending by 4.3 percent. Beyond bolstering the continent’s capacity to stand up to Russia, these new capabilities are designed to increase the EU’s “strategic autonomy” vis-à-vis the United States. In addition, 25 of the EU’s 28 member states have agreed to endorse an EU defense pact, known as Permanent Structured Cooperation, that “could cover projects ranging from new battle tanks to the deployment of multinational forces.”

#### The link is linear

Robert Einhorn 17. Fellow with the Arms Control and Non-Proliferation Initiative and the Center for 21st Century Security and Intelligence, both housed within the Foreign Policy program at Brookings, “Non-Proliferation Challenges Facing the Trump Administration,” Foreign Policy at Brookings, Arms Control and Non-Proliferation Series Paper 15, https://www.brookings.edu/wp-content/uploads/2017/03/acnpi\_201703\_nonproliferation\_challenges\_v2.pdf

**The Japanese, like the South Koreans, can never be reassured enough**, **especially given current worrisome developments in the regional security environment**. We can expect that, in future bilateral security meetings, the Japanese will press for many of the things the South Koreans are seeking, including a more prominent role in the planning and operation of the U.S. extended nuclear deterrent. While the likelihood of Japan eventually opting for its own nuclear deterrent is lower than that of South Korea, it still behooves the Trump administration to give priority in its bilateral relations with Tokyo to addressing Japanese anxieties and ensuring that its ally **remains confident in U.S. security guarantees.**

### AT Mining

#### all their critiques have been solved

NEA 14 (2014, The Nuclear Energy Agency (NEA) is an intergovernmental agency that facilitates co-operation among countries with advanced nuclear technology infrastructures to seek excellence in nuclear safety, technology, science, environment and law, “Perceptions and Realities in Modern Uranium Mining,” <https://www.oecd-nea.org/ndd/pubs/2014/7063-mehium-es.pdf>)

Introduction Producing uranium in a safe and environmentally responsible manner is not only important to the producers and consumers of the product, but also to society at large. Given expectations of growth in nuclear generating capacity and associated uranium demand in the coming decades – particularly in the developing world – enhancing awareness of leading practice in uranium mining is important. This extended summary of the report Managing Environmental and Health Impacts of Uranium Mining provides a brief outline of the driving forces behind the significant evolution of uranium mining practices from the time that uranium was first mined for military purposes until today Uranium mining remains controversial principally because of legacy environmental and health issues created during the early phase of the industry. Today, uranium mining is conducted under significantly different circumstances and is now the most regulated and one of the safest forms of mining in the world. The report compares historic uranium mining practices with leading practices in the modern era, and provides an overview of the considerable evolution of regulations and mining practices that have occurred in the last few decades. Case studies of past and current practices are included to highlight these developments and to contrast the outcomes of historic and modern practices. With over 430 reactors operational worldwide at the end of 2013, more than 70 under construction and many more under consideration, providing fuel for these long-lived facilities will be essential for the uninterrupted generation of significant amounts of baseload electricity for decades to come. While phase-out plans have been announced by a few countries following the 2011 accident at the Fukushima Daiichi nuclear power plant (NPP) in Japan, the long lifetimes of existing and future NPPs will prompt an increase in uranium mine production. The issue of sourcing uranium from producing countries with an acceptable regulatory framework and from mining companies applying leading mining practices is therefore becoming increasingly important considering that a number of countries with NPPs or plans to construct them have no domestic uranium mining. However, public perception of uranium mining is largely based on the adverse health and environmental impacts resulting from past practices that took place during an essentially unregulated early phase of the industry. During this early phase, uranium mining was conducted principally for strategic military purposes. As with all forms of mining, the driving force of the era was maximising production, with little regard for environmental consequences. This was also true for other heavy industries in that period, where the priority was production and economic benefits. Because of the radioactive properties of uranium, the health and environmental impacts of these early operations and practices were more pronounced than for other commodities. Legacy mining facilities in countries that produced uranium in this early era now need government funding to finance the remediation required to render the sites safe and stable. Worker health and safety awareness and associated regulations were in their infancy at the time. As a result, workers were being exposed to levels of radiation considered hazardous today and an increased incidence of lung cancer and other diseases was documented. The health of residents in the vicinity of early uranium mining facilities was also negatively affected at times since uncontained tailings and untreated discharges contaminated local drinking water supplies. Historic mine development and operating practices, combined with a general lack of effective remediation, has contributed to a negative public view of uranium mining. The contaminated legacy sites resulting from these poor past practices present an additional challenge to proponents of new uranium mine development. The move to regulation and best practice From its discovery to World War II, uranium was often mined in what can be broadly termed as a “free mining” system. The impacts of this free mining approach are evident in the gold rushes of the 1840s to 1890s across North America and Australia, where staking and mining took place in an uncontrolled fashion leaving a legacy of mine sites in need of remediation. By the 1970s, the impacts from the early military era uranium mining operations on the health of workers, the environment and the communities located nearby the mines became increasingly evident. Societal pressure, typically driven by unions representing miners, led to a number of investigation boards, commissions of inquiry and numerous health studies that clearly identified the extent and farreaching impact of historic mining operations, which lacked proper operational and waste management practices. It is out of these investigations and associated research that modern mining and milling practices were born. Moving from virtually no waste management planning to multistage effluent treatment processes with the engineered, purpose-built waste management systems of today was an arduous process that built on lessons learnt and spanned more than three decades. In terms of worker protection, the mining industry was transformed from one where miners were working in poorly ventilated underground mines with minimal training and ground support, to one with a geotechnical and structurally designed, wellventilated and monitored mine working environment with well-trained staff, qualified mine engineers and dedicated safety supervisors to monitor and oversee the operations. It was equally as challenging to make improvements in these areas, which ultimately led to the emergence of stronger regulatory/ government oversight and inspections, including increasing consequences via the force of law for poor performance or non-compliance. Today’s leading practice uranium mine and mill sites, and other types of nuclear facilities, are regulated by an independent agency that reports to the head of state or parliament and its elected officials. This greatly reduces the possibility that political or economic goals could influence regulatory decisions. A nuclear regulatory agency ideally operates under a judicial or quasi-judicial process, making decisions in an open and transparent manner, maintaining a clear record of decisions and allowing everyone the right to be heard. Experiences from modern uranium mines show that successful companies have developed strategies to handle both the positive and negative impacts of mining and processing on communities and the environment. This has occurred with the close cooperation, communication and participation of local communities. A dialogue must take place among the community, the company and the government, with the end goal of ensuring that no additional legacy mining and milling sites, health or environmental issues are created. Countries beginning uranium mining for the first time have the opportunity to benefit from past experience in other countries, but it will take time to develop the capacity required to promote the development of leading practice mining. Developing, staffing and maintaining a leading practice mine regulator requires both time and resources. Phases of uranium mining The report outlines the five life cycle operational phases that begin once exploration has been successful in defining an orebody of commercial interest. • Design covers all aspects of developing an orebody from discovery to mine production and is critical for documenting all potentially significant impacts, obtaining regulatory approvals and developing corresponding corrective actions. • Construction includes all physical activities on the site to prepare the area, to mobilise workers and materials to the site and to carry out the physical construction work determined by the detailed design. This phase lays the groundwork for the safe operation of the facility during the production phase. • Production includes all aspects of the operation while production is the primary purpose. This phase is where most of the immediate impacts will occur and, in turn, where active controls dominate. • Rehabilitation covers all activities from the end of production, including closure of the operation, physical decommissioning and remediation activities, and the monitoring and surveillance required to confirm that the rehabilitated site is performing as designed. Moving from active controls to passive controls is the dominant activity in this stage. • Handover is the period when formal control is transferred from the mining company to the authorities. Acceptance of the rehabilitated facilities can be a significant risk to the authorities; so there is a need for rigorous requirements and a need to demonstrate that the facility is capable of long-term compliance (sometimes referred to as institutional controls). In setting handover criteria, the onus is on government authorities to ensure that measures for long-term health, safety and environmental protection are in place, are well-funded and sustainable. For each individual operation, there are a wide range of issues that must be addressed in order to minimise health, safety and environmental impacts to acceptable standards. The report divides operational challenges into key historical challenges and modern life cycle parameters. It underlines that any approach employed must be tailored to the individual circumstances of the operation; generic approaches are not universally appropriate. Contrasting key global aspects of past and leading practice uranium mining The key challenges of uranium mining are: 1. Worker health and safety; 2. Radiation protection (worker and public); 3. Water (surface and groundwater); 4. Tailings; 5. Waste rock management. 1. The health and safety of workers and the public is critical to societal acceptance of uranium mining since past practices led to serious impacts that remain a fundamental part of the arguments against uranium mining today. Workers were not properly trained or supervised and they often worked in dangerous conditions. • Historically, the health and safety of workers in the early phase of mining was neither wellunderstood nor the high priority issue that it is today. Injury and fatality rates were high. • In modern, leading practice mining, the responsibility for identifying and correcting health and safety hazards in the workplace is shared among all parties involved: employers, contractors, owners, supervisors and workers. Laws are enforced by a workplace regulator that independently inspects, reviews, records and promotes workplace safety. As a result of these modern approaches, a marked improvement in conventional worker health and safety performance has been demonstrated. These advances have resulted from the development of legislation to establish standards, the creation of regulatory agencies with inspection and enforcement powers and the implementation of training programmes by mining companies. Leading practice uranium mining has better safety performance than occupations generally considered much safer, such as retail and office work. The critical role of workers is to effectively implement their training on a daily basis to create a safe workplace, take reasonable precautions to protect their own health and safety as well as that of their colleagues, make effective use of the safety equipment provided and co-operate with their site occupational committees. Workers are also responsible for reporting safety concerns internally and to regulatory authorities. Uranium mining companies in Canada, for example, have received national recognition for award-winning safety performance in recent years. 2. Radiation protection of workers and the public is a core requirement for successful uranium mining operations, and occupational doses are dependent on the characteristics of the operation as well as site-specific factors. • Historically, during the military production boom in the mid-20th century, little was known about radiation health risks, and virtually no radiation protection measures were in place in uranium mines and mills. Combined with a strong motivation to maximise production at all costs, this resulted in exposure situations that were much higher than today due to the lack of proper dust controls and adequate ventilation. These circumstances led to the build-up of high levels of the radioactive gas radon. Historical operations have subsequently been the focus of epidemiological and other studies that have led to a better understanding of the risks and have strengthened the radiation protection system. • In modern, leading practice uranium mining, levels of occupational exposure today are far below established regulatory limits. Dose limits have been adjusted accordingly and modern occupational exposure is significantly lower than historic levels of exposure. Corrective measures to successfully reduce doses include using mining methods that limit the time that personnel work in high-grade ore areas, providing cleaning areas to prevent the build-up of active material, monitoring to keep personnel informed of higher dose areas and using shielding to reduce dose rates. Controlling worker exposure to radon in uranium mines and mills also requires engineering designs and processes to remove radon from the workplace. Radon gas produced during mining and milling is continuously monitored, controlled and ventilated away from workers to avoid hazardous exposure. Presently, worker exposure to radon and its decay products in the uranium mining and processing industry are as low as, or only slightly higher than, public exposure to natural radon. Public health and safety – members of the public have expressed concerns about the potential for being exposed to higher than regulated limits of radon, uranium and other potential hazards, particularly when residing in proximity to an active uranium mine. Radon releases into the atmosphere form a very small portion of total human exposure (<1%) and releases beyond the licensed boundaries of the mine and mill have been shown to be insignificant. Releases of uranium and other heavy metals into the receiving environment can be effectively managed so as to limit them to acceptable levels. • Historically, the most significant public radiation doses were associated with the post-closure phase of the operation when restrictions on site access can be either lifted or ignored, allowing direct exposure pathways to dominate in cases where sites have not been properly decommissioned and remediated. During rehabilitation, radon emissions can be substantially reduced by installing a soil or water cover on radon-emitting facilities. In cases where remediation has not been properly completed, the continued exclusion of the public from higher risk areas through zoning and land use controls or warning signs reduces the potential for increased public exposure. • With modern radiation protection and controls at the uranium mine facility, off-site members of the public, even those living nearby the operations, are well-protected. Separation of the public from the immediate direct sources of exposure is generally sufficient to ensure that doses remain low. In addition, practices that reduce dust emissions, such as restricting emanating areas to a minimum size and number and keeping tailings moist, reduce total emissions. 3. Ensuring that overall water quality is protected is of paramount importance to the success of the facility. High performance standards implemented by the operator, effective regulatory oversight, comprehensive monitoring programmes and public engagement are all key factors in dealing with water quality issues. Water may be encountered in or near mine workings or used in extraction processes. Mining activities can be undertaken in the proximity of water sources important to both human and non-human biota. Uranium mining and milling can also be undertaken in dry regions, where water is not readily available for make-up or process water and must be pumped into the site from a considerable distance. Alternatively, mining can be undertaken in environments characterised by large amounts of seasonal rainfall, where management of excess water may periodically require significant planning and effort Historically, early mine practices did not employ adequate control and treatment techniques, resulting in the contamination of local watersheds, nearby low-lying areas and, in some cases, areas further downstream. Drawdown of groundwater resources and groundwater quality impacts have also been documented. Over time, however, and especially since the 1970s, standards for water releases have been strengthened. Initially these improving standards were designed to protect subsequent human use of water resources, but more recently they have been further developed to protect non-human biota (fish, flora and fauna) and groundwater resources. Previously, ISL operations at times resulted in unacceptable groundwater impacts because the potential environmental impacts were not taken into account prior to mining and the technology was in its infancy. This led to the injection of more acid or alkaline fluid (lixiviant) than was withdrawn to increase production, resulting in an outward flow of lixiviant from the mining area. The latter was compounded by improperly installed wells that leaked into the surrounding aquifers, some of which were high-quality sources of drinking water. • In modern, leading practice mining, water management and the control of water that is either flowing to the site or discharged/diverted from the site are a costly and challenging focus of activities. The operator must collect and treat all contaminated water to meet acceptable standards prior to release. • For effective control over the ISL operation, water balance modelling of the well field and plant must be undertaken during operations. Extraction must be designed to minimise the risk of breaching impermeable strata and excursions of mining solutions from the area being mined. For example, the volume of the extracted solutions in flowing aquifers should be slightly higher than the volume injected to ensure a net inflow from the neighbouring aquifers, as opposed to an outward flow, as was the case in past operations. A mining proposal must be based on a full understanding of the hydrological, hydrogeological and hydrogeochemical features of the area, including those that would justify the use of ISL extraction. The nature of the mining solution and the well field design needs to match the site characteristics, particularly the minerals and groundwaters in the mineralised aquifer. Mining should not compromise groundwater in the mineralised aquifer to the extent that it cannot be remediated to meet the agreed post-mining use. At no stage should mining compromise groundwater use in the mineralised aquifer outside an agreed distance (not exceeding a few kilometres). Other aquifers present in or around the mine lease should not be affected by uranium extraction. 4. Tailings are the waste product remaining after the extraction of a valuable element from the mined ore in open-pit and underground mining operations. In extractive industries, tailings often represent the primary hazardous waste which must be managed in the very long term. Tailings management broadly encompasses the chemical and physical processes involved in the production and placement of tailings, as well as the development, operation and closure of the facility where the tailings are impounded. Uranium extraction is generally accomplished either by acidic (e.g. sulphuric acid) or alkali (e.g. bicarbonate) leaching, the choice depending on the mineral composition of the ore. The treatment process also liberates other constituents of environmental concern, such as heavy metals. Consequently, water (liquid effluent) discharged with the solids to the tailings impoundment must be removed by evaporation or treated prior to release. After extraction of uranium, tailings still contain some uranium (extraction never reaches 100%), as well as other radioactive elements of the uranium decay chain, including radium. The decay of radium is responsible for radon exhalation from the tailings surface. The amount of radioactivity remaining in the tailings is to a large degree controlled by the grade of the ore brought to the mill for processing. Generally, about 85% of the total activity contained in the uranium ore is deposited in the tailings. After decay of thorium-234 and protactinium-234 radioisotopes within a few months, the activity diminishes to approximately 75% of the ore and remains stable at this level of activity for more than 10 000 years. The arsenic, nickel and other heavy metals in the ore, as well as chemicals from the extraction process, are typically found in the tailings. The risk presented by the tailings containment relates to the probability of a containment failure and/or seepage from the tailings impoundment impacting the surrounding environment, particularly surface and groundwater. For uranium tailings, the perceived risk is heightened by the presence of radioactive elements, despite the fact that the most significant risk arises from concentrations of heavy metals. However, if tailings are managed properly, the impact on the environment and human health is considerably lower than societal perceptions would have some believe. Historically, when environmental impacts were neither understood nor an issue of concern to the public, few governments regulated the environmental aspects of mining and tailings management. This meant that the physical and chemical compositions of the tailings were not adequately managed or controlled. Tailings were simply placed in low-lying areas, such as streams or lakes convenient to the processing facility. Such practices would not be approved by regulatory agencies today unless the appropriate lack of adverse impacts could be clearly demonstrated. In modern, leading practice mining, contaminant transport modelling tools are used to support the design and validation of tailings management facilities and the long-term predictions of the effects of contaminant transport on the receiving environment. Calibration of the models using environmental monitoring data collected during the operating period adds validity to projections of long-term performance. Beyond improving the design of the facilities in which tailings are stored, advancements in tailings management have focused on controlling the chemical and physical properties of tailings. Today, even tailings from the most challenging high grade ores can be managed and safely disposed. Leading practice is to either dispose of tailings in a purpose-designed management facility or in a mined-out open pit that has been engineered to contain and consolidate tailings in a way that isolates the material from the receiving environment long after the facility is closed, remediation is completed and the land and monitoring responsibilities are transferred from the mining company to the government. Mined-out open pits have physical stability advantages over man-made structures, require less maintenance and are not prone to physical failure. 5. Waste rock is material excavated during the open-pit and underground mining of any mineral, including uranium, which is of no commercial value. It can be either clean (of no environmental concern) or problematic. Historically, limited consideration of the chemical composition of waste rock was given prior to its placement in waste piles or its use as mine backfill or construction material. As a consequence, a legacy of acid drainage and heavy metal leaching from mine sites around the world was created. In some cases, problematic waste rock has been removed from mine sites and inappropriately used elsewhere. • In modern, leading practice mining, good characterisation and controls allow a significant portion of the clean waste rock to be stockpiled and readily used for construction purposes, such as in roadways or for erosion protection around stream crossings. Problematic waste rock with trace quantities of the target mineral or other minerals that have the potential to adversely impact the environment must be separated and treated appropriately. The presence of sulphate or carbonate minerals is of particular concern. The weathering (exposure to air and water) of waste rock containing such minerals has the potential to alter the chemical properties of water, which can have a direct and detrimental effect on the environment through acidification or through the mobilisation of other heavy metals in the waste rock or the environment. The flow of acidified water from mine sites, generally referred to as acid rock drainage (or acid mine drainage), is a common issue for all mining activities. Uranium mining, however, has the additional concern of the presence of radioactive elements, and thus the mobility and effects of radionuclides in the environment must also be considered in the management of mine rock. The properties of open-pit and underground mine waste rock are an important planning consideration in modern mines. Waste rock is characterised through sampling and laboratory testing to understand the potential for acid generation and leaching of trace elements. Mine rock management plans are developed and the potential effects on the environment are considered early in the mine development process. Such plans include strategies to segregate benign (clean) rock from potentially problematic mine rock. Modern parameters of uranium mine management As the regulatory regime evolved and the industry adapted and developed innovations to meet emerging requirements and issues, a number of parameters have been introduced into leading practice operations that were seldom, if ever, used or even considered during the mine life cycle in the early stages of the industry. These additional aspects of mine development, operation and closure are today considered crucial to effectively managing the health, safety and environmental impacts of the operations. With the implementation of these mine life cycle parameters and regulatory requirements, leading practice uranium mining has become a leader in safety and environmental management. 1. An effective public consultation process facilitates a dialogue with the public and other stakeholders to take into account questions and concerns. This is not just an outward-flowing information programme. Rather, it is a two-way process that actively encourages and documents questions and answers that arise throughout the stakeholder involvement process. Improving public information efforts and consultation with stakeholders allows the industry to better counter any unfounded concerns or fears about the regulation and management of radiation and its impact on workers, the public and the environment. The public is a valuable resource to proponents of uranium mining and regulatory agencies, and should be treated accordingly. A knowledgeable and supportive public will facilitate the timely review and licensing of new mines. Public fear and resistance will do just the opposite. In countries with leading practice uranium mines, public consultation is a requirement in mine development from the early stages of a proposal through all licensing steps, including the operational stage when monitoring data is made publicly available and the mining companies and regulators discuss results with the public and other interested stakeholders. Public consultation and stakeholder involvement are crucial components to obtaining and maintaining a social licence to conduct mining. 2. An environmental impact assessment (EIA) is needed to plan projects carefully with opportunities for stakeholder participation, including the interested public and special interest groups, such as indigenous populations. An EIA is a process used to predict and minimise the environmental effects of proposed initiatives before they are fully planned or undertaken. It is a planning, decision-making and public consultation tool that is used to inform and engage members of the public and other interested parties. Overall, the objectives of an EIA are to incorporate environmental factors into decision making, identify potential environmental impacts of a proposed project and to outline ways of minimising or avoiding adverse environmental effects before a project is licensed and initiated. It provides stakeholders with an overview of the project and details specific measures proposed to mitigate or minimise potential environmental effects that could arise if the project is to proceed. 3. An analysis of socio-economic impacts and benefits, in order to evaluate local community impacts, is undertaken in leading practice jurisdictions prior to decisions to begin mining – often as part of an EIA. Mining is a temporary use of the land and all mines eventually close. Although the industry can generate significant economic opportunities during mine development and production, it will ultimately leave a gap in the regional economic infrastructure when the operation is closed. Mining can also bring a transient workforce to a region, sometimes in remote areas. If mining is approved, arrangements with governments are typically established to ensure that local inhabitants benefit from the extraction of the resource, even after the mine closes, since businesses and skills developed during operations are transferable to regional mining and other activities. It is after all at the local level that the impacts of mining will be the greatest. The mining industry is a major force in the world economy, occupying a primary position at the start of the resource supply chain. The benefits of mining include direct foreign investment, national investment in the local economy and the creation of exports that can be significant economic drivers. Uranium mining can provide increased employment, training and salaries. It can also be an economic stimulus to the local and broader economy, allowing for the development of secondary industries such as retail and service sectors that supply the mine and the mine’s employees. Mining requirements for infrastructure such as roads, airports, electricity and water can lead to longer-term regional development. Mine lifetimes vary considerably and although some can continue operating for decades, eventually either local resources will be depleted or the economics of the operation will change, leading to mine closure and decommissioning. The direct economic benefits from the activity come to an end and trained and experienced workers may have to seek employment elsewhere. During the operating lifetime of a mine, negative influences can also take place, particularly at the local level, such as a disruption of traditional lifestyles, potential social pressures created by the influx of workers and, at times, increased wealth in small communities that could lead to dependencies and other social pressures. As a result, all socio-economic aspects of mining should be carefully evaluated by stakeholders prior to the development of a mine. While uranium mining can provide important socio-economic benefits to local populations, the industry alone cannot be expected to resolve all regional socio-economic and development issues. . Environmental monitoring programmes are required to demonstrate that facilities are performing as designed. This is done through the collection of environmental data that objectively assess ecosystem impacts throughout the life of the mine and provide assurance of performance. In its early history, all types of mining and milling facilities had little or no environmental monitoring and the result was often widespread contamination that required challenging and costly remediation efforts. Had the degree of contamination been better understood with environmental monitoring programmes in place when mining began, contamination could have been detected early and corrective measures undertaken. With heightened awareness and the development of regulatory oversight in the 1970s, more and more effort has been made to establish adequate environmental monitoring programmes. Monitoring allows for the comparison of facility performance against targets and requirements set out within the EIA and licence conditions of the operation. Its general purpose is to check whether operations are impacting the environment beyond limits established by the regulator and, after decommissioning, to verify that rehabilitation works are performing as planned. Since environmental monitoring is an essential safety and environmental protection function of any uranium mining facility, the collection of sufficient baseline environmental data is a vital first step in designing and carrying out a proper environmental monitoring programme. It is only when monitoring data can be compared to pre-mining (baseline) data that the impact of the operation can be objectively assessed. It is therefore important to begin collecting baseline information in the exploration phase, before the site undergoes any significant physical disturbance. Monitoring programmes should be reviewed regularly to ensure that they remain relevant in terms of the parameters being monitored, the location of monitoring stations and the frequency of the monitoring activities. Reports must be submitted to regulators and preferably made available to the public, typically on a semi-annual or annual basis. Upstream and downstream water quality monitoring around the site must include all adjacent streams (even if intermittent), as well as rivers and lakes, and must be performed seasonally during dry periods, winter conditions, spring runoff or during the rainy season in tropical climates. A periodic full sweep of parameters in the receiving environment is typically required, interspersed with more routine reviews focused on a smaller number of aspects of concern. This can be an effective, efficient and cost-effective method of monitoring some of the key aspects. 5. Financial assurance, to cover the costs of closure and remediation activities in the case that the company cannot meet its commitments, is part of leading practice mining. Past uranium mining legacies from the early strategic era have been left to governments to remediate, often at a high cost. To provide assurance that mining companies, and not governments, are fully responsible for funding decommissioning and remediation activities, leading practice jurisdictions require uranium mining companies to post such financial assurance. This means that mining companies must produce an approved remediation plan prior to beginning production and must post appropriate financial guarantees for the expected cost of closure and remediation that could arise at any stage of the mining life cycle. To determine the value of the financial assurance required, mine reclamation and potential longterm care costs must be forecast. In many mining jurisdictions, requirements have evolved to call for the development of mine reclamation plans at the time of initial permitting, with forecasted costs of future remedial work and corresponding financial assurances required. As mine activities develop, reforecasting is periodically required (e.g. every one to five years). To account for limitations encountered when forecasting costs of activities far into the future, including reasonably foreseeable uncertainties, the value of financial assurances can be substantial. Future rehabilitation costs, as well as the cost of the financial assurances needed to address them, have proven to be effective motivators to minimise environmental liabilities during the operating period. Periodic review and adjustment of the financial guarantee for a particular site would include reductions associated with approved decommissioning of facility components during the operational phase (where possible) that reduce overall decommissioning costs. This has the added benefit of encouraging producers to conduct remediation activities during operations. 6. Planning for the institutional control framework or the “handover” phase is an important final step in the mine life cycle. In order for uranium mining companies to understand operational and financial requirements in the long term, the requirements that must be met in order for properly decommissioned mining properties to be returned to the land owner – typically the government – must be clearly established. After the operator has completed the approved decommissioning and reclamation activities, the site enters a period of transition-phase monitoring, during which the operator is required to continue monitoring and maintaining the site. During the transition-phase monitoring period, regulators continue to conduct periodic inspections and review monitoring results; and the operator continues to remain fully liable for any impacts the site may have on the environment, surrounding communities and public safety. If the site performs in accordance with the decommissioning and reclamation plan and achieves the predicted stability during transition-phase monitoring, the operator may make an application to obtain a release from further monitoring and maintenance responsibilities, as well as the obligation to maintain financial assurance. Two types of funding for the handover phase may be required, one for monitoring and maintenance and a second for unforeseen events. In addition, a formal record of the closed site is required along with management of the funding and performance of any required monitoring and maintenance work. The monitoring and maintenance fund is designed to pay for these long-term activities, while the unforeseen events fund will pay for damages resulting from severe natural events, such as floods or tornadoes. 7. Safe uranium ore concentrates (UOC) transport is a necessary component of production. With expectations that increasing uranium demand will drive expansions and development of new mining operations in various jurisdictions, and considering that production is often located outside uranium-consuming countries, safe transport continues to be a high priority. During operations, transport of various hazardous materials – including operating materials, such as acid, alkali, fuels and explosives, as well as the final or interim product – is required. Movements of dangerous goods by road, rail and/or sea are regulated by the national and/or regional competent authorities. Due to its low activity per unit mass, UOC is considered a low hazard and can therefore be transported as an industrial package with appropriate placarding and labels. The shipment of UOC is currently carried out in sealed, reusable steel drums that are loaded in ISO containers (i.e. containers certified by the International Organisation for Standardization). To ensure safe and efficient transport, good industry practices have been defined and implemented, including recommendations for drum design, size, materials and labelling, as well as requirements for lids and rings. Although UOC consists mainly of uranium, its radioactivity per mass is well below the activity of the ore. Therefore, the main health concern from UOC is related to its chemical toxicity as a heavy metal, rather than its radioactivity. Early in the development of nuclear energy, it was recognised that the transport of UOC posed a potential environmental and security risk. Strict regimes were therefore instituted as early as the 1960s. In the late 1990s, the World Nuclear Transport Institute was founded by industry to represent the collective interests of the radioactive materials transport sector. International Atomic Energy Agency (IAEA) Regulations for the Safe Transport of Radioactive Material have become an internationally accepted standard for governments and the industry. It is incumbent upon governments to adopt these regulations, which have now been adopted in about 60 countries. The transport of nuclear materials has a very good safety record, which is especially noteworthy due to the great distances involved and the large number of shipments that have been successfully made. Although UOC has been transported around the world for decades to the few existing conversion and enrichment facilities, no accident resulting in serious harm to people or the environment has been recorded to date. 8. Emergency planning encompasses both emergency preparedness and emergency response activities. At any mining site, emergency planning is part of daily business, as hazardous operating materials are regularly used. Radiological hazards also have to be considered in uranium mining and milling. As a result, the major preparedness and preparation measures for onsite emergencies at uranium mines and mills are covered within the radiation protection programme. Emergency preparedness is related to the type of mining undertaken (underground, open-pit or ISL), since different emergency scenarios have to be considered for each type. Nonetheless, offsite consequences, radiological or otherwise, are not expected from uranium mining operations. Off-site contamination requiring intervention could occur, however, through leakage from tailings management facilities. The requirements for emergency preparedness are defined in national regulations and are therefore country-specific. In general, national authorities and operators are expected to regularly conduct assessments of threats posed by facilities. A very important point when dealing with incidents related to radioactive material is keeping the public informed. This helps to avoid any inappropriate public reactions on the one hand and any criticism for a lack of transparency on the other. To this end, it is recommended that protocols be established that outline means of communicating incidents to the public. 9. Nuclear security and safeguards have gained importance over the past years, especially after the terrorist attacks of September 2001 in the United States, and have turned out to be more complex than safety-related issues due to the external environment and varying threats. The main apprehension is that a criminal organisation will obtain nuclear materials to either create a nuclear weapon or a radiological dispersion device (“dirty bomb”), or that it will sabotage a nuclear facility or the transport of nuclear material. In the case of uranium mining, the main item of security interest is UOC, where about one shipping container (25 barrels) or 10 tUOC is considered a “significant quantity”. The term significant quantity denotes the amount of fissile material necessary to create a nuclear explosive device, although considerable expertise and access to restricted facilities for processing would be required to turn UOC into a weapon. The creation of a dirty bomb from radioactive materials located at a mine site is rather unlikely and accordingly is less of a security concern. Although there is radioactivity contained within the tailings, they have low activity per mass and are therefore not as easily distributed and would not be as effective as other sources. The establishment and maintenance of a good physical protection regime for nuclear materials lies in the hands of the state. It is responsible for creating the legislative and regulatory framework, designating competent authorities, providing education and training, setting responsibilities and evaluating national threats. IAEA safeguards also provide a basis for nuclear security since confirming that relevant material is only used for its intended purpose contributes to the prevention of illegal acts. The IAEA monitors and verifies all source and special fissionable materials in countries under safeguards. Under an Additional Protocol, a state is required to provide the IAEA with broader information covering all aspects of its nuclear fuel cycle activities, including uranium mining. Mine operators are required to take measures that make unauthorised access to radioactive materials as difficult as possible. These are based on feasible risk and threat scenarios and entail the establishment of limited access areas, the installation of detection systems against unauthorised intrusion, the development of contingency plans to counter malicious acts and the familiarisation of state response forces with the sites. Effective management accounting for uranium mine production is also important so as to avoid understating uranium production and to facilitate the detection of insider threats. The use of established measurement and record systems, automated data entry and clearly defined responsibilities are all part of an effective management system. Probably the most vulnerable operation in uranium mining is the transport of nuclear materials. However, due to the non-fissile nature of UOC, it is of limited safeguard concern, and as such, security requirements are generally comparatively low. Although incidents of loss or theft of uranium have been halved since the early 1990s, the occurrence of a handful of incidents each year indicates that security and safeguards at mines could be further improved. 10. Knowledge transfer is a key final step for the operator or the project manager who hands over the site to the long-term care and maintenance programme. The long-term objective of modern uranium mining is to ensure that the site where mining and milling activities take place, once decommissioned and remediated, will remain stable and safe over the long term. To ensure this long-term safety and stability, future generations must be fully aware of what is located where, why it is there and what must be protected or maintained, to name just a few of the important pieces of necessary information. The key documents that summarise the operation and remediation of the site, as well as the engineered close-out design and monitoring verification programme, must be readily available in a secure location. All of this detailed information must be archived in an information management system that is likely to be government-controlled. This occurs after long-term stability has been achieved and confirmed by the post-remediation monitoring programme, and after regulatory approval has been obtained following a final phase of public consultation.Conclusions Experiences from modern uranium mines show that in countries with the appropriate regulatory requirements and a regulatory agency staffed with qualified personnel, successful companies develop innovative strategies to manage all potential impacts of mining and processing on workers, communities and the environment. An ongoing dialogue among the main stakeholders – the community, the mining company and the government – has proven critical in this regard. Leading practice uranium mining is highly regulated and in several important ways distinctly unlike mining practices employed in the past. Today, mine and mill workers are trained and protected from unacceptably high exposure to radiation through a combination of implementing safe working practices and, in both underground mining operations and uranium mills, using high-capacity ventilation systems that continuously evacuate airborne radioactive particles from higher-risk working areas. Environmental planning and monitoring throughout the life cycle of the mine ensures that the planned life cycle performance is achieved through to the post-decommissioning period, minimising the environmental effects to acceptable standards and avoiding impacts on local populations. These greatly improved modern mining practices are the combined result of learning from past practices, implementing stringent regulatory requirements to achieve societal expectations and successfully applying innovative approaches developed by companies to meet, and in many cases exceed, these regulatory requirements.

#### Modern uranium mining practices are safe – their ev is alarmist

Scissons 13 (Kevin Scissons, former regulator of uranium mining, “Modern uranium mining is safe and can protect the environment nearby, downstream”. 10-25-2013 <http://www.chathamstartribune.com/opinion/article_9ce6ba26-305e-11e3-86fb-0019bb2963f4.html>)

Yes, uranium mining can be and has been done safely for decades in Canada, where I served as director of uranium mines and mills for the Canadian Nuclear Safety Commission. In fact, over the last few decades uranium mining and milling has been done safely in many places around the world including in the United States. This trip was not my first contact with the issue of uranium mining. In the fall of 2011, I met with a delegation of Virginia legislators, farmers and other elected officials to share my 32 years of Canadian regulatory experience with them. At the time, I was still in my official position with the Canadian Nuclear Safety Commission, but soon after I retired I accepted an invitation to come to Virginia, and have been following this debate closely ever since. On this recent trip, it was my pleasure to share with people in Pittsylvania County what we have learned in Canada and globally about the effective regulation of uranium mining — regulation that puts the health and safety of workers, the environment and the public first. As I said many times while I was in Virginia, my perspective is one of a regulator. I am not an advocate for mining, but I am a passionate advocate for effective regulation that protects people and the environment. It is within that context that I share the answers to questions most commonly asked by concerned Virginians: Why did uranium mining cause so much concern in the past? Unfortunately, the poor mining practices (uranium and other metals) of the 1940s, 1950s and 1960s were undertaken with no regulatory controls or protection of people and the environment. Those terrible impacts continued even into the early 1980’s when “the modern era” of uranium mining began. Today, in Canada and around the world, the modern uranium mining industry is very different than it was in the 1960s; off-site impacts are no longer tolerated and have effectively been con-trolled for three decades. There are many things that are much safer today than they were 20 or 30 years ago, from cars and airplanes to surgery and other medical treatments. That trend has been the same with every industrial activity, including uranium mining. Can uranium be mined in a climate like Virginia? Based on our experience in Canada and internationally, yes, a modern uranium mine here can be designed to operate safely in your climate. The precise answer will come when regulations are set and an application made. Our experience and results in Canada provide a good indicator that engineers and regulators in Virginia can also achieve these successful results. In Canada uranium is mined safely in a harsh and challenging climate that includes land surrounded by thousands of lakes, a high ground water table, extreme cold temperatures and a spring melt that gives us an entire winter’s worth of precipitation to deal with all at once. Can one little mistake or human error cause a catastrophic event at the site, like a release off site of the uranium tailings? No, modern uranium mines are designed with the likelihood of human error in mind and employ multiple levels of contingency measures, fail-safe systems, detection systems, secondary containment systems, and controls to guard against them. Though mistakes and human errors do occur, and valves or pipes might rupture, all those kinds of risks are addressed and controls put in place to minimize the impact and ensure the safety of workers, the public and the surrounding environment. Is there a threat to our water supply either nearby or downstream as far away as Virginia Beach? Based on my recent site visit of the Coles Hill area I feel very confident saying “no” to this question. The U.S. Nuclear Regulatory Commission operates much like the Canadian Nu-clear Safety Commission and they govern the milling process and the safe storage of the tailings. Both agencies have very similar standards and requirements. I foresee no circumstance under which any proposal would get approved by regulators that isn’t a safe, modern facility with below-grade tailings management, a multi-layered containment system, with seepage detection and groundwater monitoring. In fact, it is difficult to imagine an operator proposing anything less in today’s world where the consequences and cost of environmental damage is so high and the technology and processes to avoid it so readily available. These modern mining operations I refer to have a track record of success. With the assistance of local community members, routine testing of the water, wildlife and vegetation surrounding our sites consistently shows that mining activities have not harmed the environment near these sites or anywhere downstream. If you protect those closest to the site, you will by extension protect anyone farther away. To go even further, peer-reviewed studies have shown that over the last 30 years, modern uranium mines and mills in Canada have had no adverse impacts on the health of local populations. Our robust air monitoring programs show that there are no harmful off-site releases of radiation. We have recorded no increased cancer rates or any other health problems in our uranium mining communities.

### AT Terror

#### No nuke terror – people like Allison are hacks

* Two decades of threats haven’t panned out
* Too many things can go wrong:

Getting trusted collaborators

Stealing and transporting guarded material

Getting the top technicians in the world

No ability to test

Skilled detonation crew

All that while attracting zero attention

* Weapons have safety devices, are stored in pieces in different places
* Terrorists are like Bond villains that scheme instead of accomplishing anything
* Most attacks are bombs which don’t even work

Mueller and Stewart 10/29/18 [John Mueller is Woody Hayes Senior Research Scientist, Mershon Center for International Security Studies, and adjunct professor of Political Science, at Ohio State University. He is also a Senior Fellow at the Cato Institute in Washington. Mark G. Stewart is Professor of Civil Engineering and Director of the Centre for Infrastructure Performance and Reliability at The University of Newcastle in Australia. Terrorism and Bathtubs: Comparing and Assessing the Risks. October 29, 2018. https://www.tandfonline.com/doi/abs/10.1080/09546553.2018.1530662?journalCode=ftpv20]

However, there is of course no guarantee that things will remain that way, and the 9/11 attacks inspired the remarkable extrapolation that, because the terrorists were successful with box cutters, they might soon be able to turn out weapons of mass destruction— particularly nuclear ones—and then detonate them in an American city. For example, in his influential 2004 book, Nuclear Terrorism, Harvard’s Graham Allison relayed his “considered judgment” that “on the current path, a nuclear terrorist attack on America in the decade ahead is more likely than not.”11 Allison has had a great deal of company in his alarming pronouncements. In 2007, the distinguished physicist Richard Garwin put the likelihood of a nuclear explosion on an American or European city by terrorist or other means at 20 percent per year, which would work out to 91 percent over the eleven-year period to 2018.12

Allison’s time is up, and so is Garwin’s. These off-repeated warnings have proven to be empty. And it is important to point out that not only have terrorists failed to go nuclear, but as William Langewiesche, who has assessed the process in detail, put it in 2007, “The best information is that no one has gotten anywhere near this. I mean, if you look carefully and practically at this process, you see that it is an enormous undertaking full of risks for the would-be terrorists.”13 That process requires trusting corrupted foreign collaborators and other criminals, obtaining and transporting highly guarded material, setting up a machine shop staffed with top scientists and technicians, and rolling the heavy, cumbersome, and untested finished product into position to be detonated by a skilled crew, all the while attracting no attention from outsiders.

Nor have terrorist groups been able to steal existing nuclear weapons—characteristically burdened with multiple safety devices and often stored in pieces at separate secure locales—from existing arsenals as was once much feared. And they certainly have not been able to cajole leaders in nuclear states to palm one off to them—though a war inflicting more death than Hiroshima and Nagasaki combined was launched against Iraq in 2003 in major part under the spell of fantasies about such a handover.14

More generally, the actual terrorist “adversaries” in the West scarcely deserve accolades for either dedication or prowess. It is true, of course, that sometimes even incompetents can get lucky, but such instances, however tragic, are rare. For the most part, terrorists in the United States are a confused, inadequate, incompetent, blundering, and gullible bunch, only occasionally able to get their act together. Most seem to be far better at frenetic and often self-deluded scheming than at actual execution. A summary assessment by RAND’s Brian Jenkins is apt: “their numbers remain small, their determination limp, and their competence poor.”15 And much the same holds for Europe and the rest of the developed world.16 Also working against terrorist success in the West is the fact that almost all are amateurs: they have never before tried to do something like this. Unlike criminals they have not been able to develop street smarts.

Except perhaps for the use of vehicles to deliver mayhem (though this idea is by no means new in the history of terrorism), there has been remarkably little innovation in terrorist weaponry or methodology since 9/11.17 Like their predecessors, they have continued to rely on bombs (many of which fail to detonate or do much damage) and bullets.18

#### Big issue with the terrorism argument – the link chain’s insanely long and improbable – there’s a laundry list of possibilities – either a) it’ll fail or b) won’t happen.

Chapman 11 [Steve, graduated from Harvard and the University of Chicago, Chicago Tribune editorial writer, Dec 29, 2011 “The Implausibility of Nuclear Terrorism” <http://townhall.com/columnists/stevechapman/2011/12/29/the_implausibility_of_nuclear_terrorism/page/full/> // WHSRS]

Given their inability to do something simple -- say, shoot up a shopping mall or set off a truck bomb -- it's reasonable to ask whether they have a chance at something much more ambitious. Far from being plausible, argued Ohio State University professor John Mueller in a recent presentation at the University of Chicago, "the likelihood that a terrorist group will come up with an atomic bomb seems to be vanishingly small." The events required to make that happen comprise a multitude of Herculean tasks. First, a terrorist group has to get a bomb or fissile material, perhaps from Russia's inventory of decommissioned warheads. If that were easy, one already would have gone missing. Besides, those devices are probably no longer a danger, since weapons that are not scrupulously maintained (as those have not been) quickly become what one expert calls "radioactive scrap metal." If terrorists were able to steal a Pakistani bomb, they would still have to defeat the arming codes and other safeguards designed to prevent unauthorized use. As for Iran, no nuclear state has ever given a bomb to an ally -- for reasons even the Iranians can grasp. Stealing some 100 pounds of bomb fuel would require help from rogue individuals inside some government who are prepared to jeopardize their own lives. The terrorists, notes Mueller, would then have to spirit it "hundreds of miles out of the country over unfamiliar terrain, and probably while being pursued by security forces." Then comes the task of building a bomb. It's not something you can gin up with spare parts and power tools in your garage. It requires millions of dollars, a safe haven and advanced equipment -- plus people with specialized skills, lots of time and a willingness to die for the cause. And if al-Qaida could make a prototype, another obstacle would emerge: There is no guarantee it would work, and there is no way to test it. Assuming the jihadists vault over those Himalayas, they would have to deliver the weapon onto American soil. Sure, drug smugglers bring in contraband all the time -- but seeking their help would confront the plotters with possible exposure or extortion. This, like every other step in the entire process, means expanding the circle of people who know what's going on, multiplying the chance someone will blab, back out or screw up. Mueller recalls that after the Irish Republican Army failed in an attempt to blow up British Prime Minister Margaret Thatcher, it said, "We only have to be lucky once. You will have to be lucky always." Al-Qaida, he says, faces a very different challenge: For it to carry out a nuclear attack, everything has to go right. For us to escape, only one thing has to go wrong. That has heartening implications. If al-Qaida embarks on the project, they have only a minuscule chance of seeing it bear fruit. Given the formidable odds, they probably won't bother.

#### No nuke terror.

Christopher J. Fettweis 18. Associate professor of political science at Tulane University. “Pessimism and Nostalgia in the Second Nuclear Age.” *Strategic Studies Quarterly* 13.1

Finally, despite the string of bleak and terrifying projections from a variety of experts, nuclear weapons have remained well beyond the capabilities of the modern apocalyptic terrorist. The great fear of the SNA literature, that scientific knowledge and technology would gradually become more accessible to nonstate actors, has remained only a dream. Nor does there appear to be a great reservoir of fissile material in the world’s various black markets waiting to be weaponized.58 Just because something has not yet occurred does not mean that it cannot or will not occur eventually. However, it is worth noting that the world has not experienced any close calls regarding nuclear terrorism. Forecasting future unique events is a necessarily dicey enterprise, but one way to improve accuracy is to examine events that have already or almost happened. Given the many complexities involved with nuclear weapons, especially for amateurs as any terrorists would almost certainly be, it is not unreasonable to expect a few failures, or near misses, to precede success. While it is possible that we might not know about all the plots disrupted by international law enforcement, keeping the lid on nuclear near misses would presumably be no small task. As of this writing, the public is aware of no serious attempts to construct, steal, or purchase nuclear weapons, much less smuggle and detonate one. “Leakage” does not seem to be a problem, yet.59 The uniformly pessimistic projections about the second nuclear era have not, at least thus far, been borne out by events. Post–Cold War trends have instead been generally moving in directions opposite to these expectations, with fewer nuclear weapons in the hands of the same number of countries and none pursuing more. Why, then, doesnuclear pessimism persist? What are the roots of the current fashionable unwillingness—or even inability—to detect positive patterns in nuclear security?

#### No nuke terror

Leonard Weiss 15, visiting scholar at the Center for International Security and Cooperation at Stanford University and member of the National Advisory Board of the Center for Arms Control and Non-Proliferation, March/April 2015, “On fear and nuclear terrorism,” Bulletin of the Atomic Scientists, Vol. 71, No. 2, p. 75-87

Manufacturing a nuclear weapon. To accomplish this, a terrorist group would have to obtain an appropriate amount of one of the two most popular materials for nuclear weapons, highly enriched uranium (HEU) or plutonium separated from fuel used in a production reactor or a power reactor. Weapon-grade plutonium is found in weapon manufacturing facilities in nuclear weapon states and is very highly protected until it is inserted in a weapon. Reactor-grade plutonium, although still capable of being weaponized, is less protected, and in that sense is a more attractive target for a terrorist, especially since it has been produced and stored in prodigious quantities in a number of nuclear weapon states and non-weapon states, particularly Japan. But terrorist use of plutonium for a nuclear explosive device would require the construction of an implosion weapon, requiring the fashioning of an appropriate explosive lens of TNT, a notoriously difficult technical problem. And if a high nuclear yield (much greater than 1 kiloton) is desired, the use of reactor-grade plutonium would require a still more sophisticated design. Moreover, if the plutonium is only available through chemical separation from some (presumably stolen) spent fuel rods, additional technical complications present themselves. There is at least one study showing that a small team of people with the appropriate technical skills and equipment could, in principle, build a plutonium-based nuclear explosive device (Mark et al., 1986). But even if one discounts the high probability that the plan would be discovered at some stage (missing plutonium or spent fuel rods would put the authorities and intelligence operations under high alert), translating this into a real-world situation suggests an extremely low probability of technical success. More likely, according to one well-known weapon designer,4 would be the death of the person or persons in the attempt to build the device. There is the possibility of an insider threat; in one example, a team of people working at a reactor or reprocessing site could conspire to steal some material and try to hide the diversion as MUF (materials unaccounted for) within the nuclear safeguards system. But this scenario would require intimate knowledge of the materials accounting system on which safeguards in that state are based and adds another layer of complexity to an operation with low probability of success.

#### No nuke terror – super difficult, no incentive, and no patrons.

Mueller, PhD, ‘18

(John, PoliSci@UCLA, <https://www.foreignaffairs.com/articles/2018-10-15/nuclear-weapons-dont-matter?utm_campaign=reg_conf_email&utm_medium=newsletters&utm_source=fa_registration>, Nov/Dec) BW

As for nuclear terrorism, ever since al Qaeda operatives used box cutters so effectively to hijack commercial airplanes, alarmists have warned that radical Islamist terrorists would soon apply equal talents in science and engineering to make and deliver nuclear weapons so as to destroy various so-called infidels. In practice, however, terrorist groups have exhibited only a limited desire to go nuclear and even less progress in doing so. Why? Probably because developing one’s own bomb from scratch requires a series of risky actions, all of which have to go right for the scheme to work. This includes trusting foreign collaborators and other criminals; acquiring and transporting highly guarded fissile material; establishing a sophisticated, professional machine shop; and moving a cumbersome, untested weapon into position for detonation. And all of this has to be done while hiding from a vast global surveillance net looking for and trying to disrupt such activities. Terrorists are unlikely to get a bomb from a generous, like-minded nuclear patron, because no country wants to run the risk of being blamed (and punished) for a terrorist’s nuclear crimes. Nor are they likely to be able to steal one. Notes Stephen Younger, the former head of nuclear weapons research and development at Los Alamos National Laboratory: “All nuclear nations take the security of their weapons very seriously.” The grand mistake of the Cold War was to infer desperate intent from apparent capacity. For the war on terrorism, it has been to infer desperate capacity from apparent intent.

#### There’s no chance of nuclear terror- best political and empirical analysis proves that even if non-state actors could acquire, numerous factors deter use.

McIntosh and Storey, PhDs, ‘18

(Christopher, IR@UChicago, AsstProfPoliticalStudies@Bard, and Ian, CityUniversityHongKong, Fellow@ISEAS, “Between Acquisition and Use: Assessing the Likelihood of Nuclear Terrorism,” International Studies Quarterly, Volume 62, Issue 2) BW

Our approach offers a point of departure for strategically assessing the options, likely responses, and potential outcomes that could arise from the different paths available to a nuclear-armed non-state group. Too often analysts treat the decision by such groups to use nuclear weapons as if it occurs in a vacuum. In practice, terrorist groups face many short-term and long-term considerations. They are influenced by factors both external and internal to their organization. These include the potential for backlash among supporters, internal factionalization over nuclear strategy and doctrine, and an overwhelming response by the target state and the international community. Moreover, we suggest a way to bring the recursivity of strategic choice into the account of terrorist organizational decision-making. These organizations must consider the long-term effects of a nuclear attack. An attack occurs in the context of an ongoing campaign by a well-established organization. Opportunity costs exist because escalating to nuclear attack forecloses future options. As well, conducting an attack may not only preclude other strategies, but the continued existence of the group itself. This changes the game significantly. In most cases, a nuclear attack must present not just an effective option for the moment, but the only strategic option worth pursuing going forward. Once we take these considerations into account, the detonation of a nuclear weapon generally appears the least strategically advantageous option for non-state groups. Indeed, the factors presented here are analytically independent, adaptable, and scalable to particular threat contexts. We can therefore use our framework to study the opportunities and constraints faced by specific future groups. It should therefore assist in the process of planning responses to potential nuclear acquisition by terrorist groups. Successive governments have now identified nuclear terrorism as a critical concern in the formulation of security policy. This line of thinking systematically underspecifies, or simply misunderstands, key considerations that terrorist organizations take into account. These include the group’s organizational survival, opportunity costs, and the conflation of victory with the end of hostilities. Each factor presents strong disincentives to immediate nuclear attack. A nuclear-armed terrorist group is exceedingly dangerous, but for different reasons than normally assumed. The options available to the group that fall short of detonation or attack remain considerable, albeit less spectacular and immediate. Just as scholars like Bunn et al. (2015) are careful to do, political actors and analysts should resist uncritically deploying the term “nuclear terrorism” in an umbrella fashion. This point goes beyond even the attempts at disaggregating “use” presented here. The threat of an attack involving an improvised nuclear device is vastly different than that of a “dirty bomb,” and both have little in common with the threat posed by an attack on a nuclear facility. Each deserves separate consideration when formulating policy, even if measures taken to address these concerns, such as controlling nuclear leakage, ultimately overlap. If any of the acquisition or threat scenarios we explore come to fruition, then potential target states will need strategies that potentially employ positive, as well as negative, incentives to lessen the attractiveness of nuclear attack. As we argue, a crisis involving a nuclear-armed terrorist group will be a negotiation— regardless of what the target state chooses to label it. Far from demonstrating weakness, employing threats while dangling the possibility of political concessions can widen internal divisions, heightening the overall organizational costs of escalating violence (Toros 2008; Cronin 2009). Finally, efforts designed to improve intelligence capabilities both prior to and post-attack remain vital. Signature analysis as a forensic measure has shown promise as a way of identifying the origin of nuclear material—in some cases it can identify whether or not it was provided by a state (Kristo and Tumey 2013). These efforts would be improved with a more widespread international commitment via the IAEA to placing signature markers in weapons and weaponizable material (Korbatov et al. 2015, 70; Findlay 2014, 6). Ultimately, when it comes to the threat of a nuclear attack by a terrorist, presumption should lie squarely on the side of skepticism rather than inevitability. While some terrorist organizations have some incentives for nuclear acquisition, paradoxically and thankfully, the most strategic uses of a nuclear weapon fall well short of actual nuclear attack. From a scholarly perspective, as well as a political one, we need to start to think through how states would act in a world with nuclear-armed non-state actors. In doing so, we should avoid assumptions that fit neither with known nuclear strategy nor the empirical behavior of non-state organizations. Like most clichés, the post–Cold War trope that the threat of attack is higher now than it was during the US-USSR arms race (Litwak 2016) obscures much more than it reveals.

#### Nuclear terrorism causes extensive cooperation, not escalation.

McIntosh and Storey, PhDs, ‘18

(Christopher, IR@UChicago, AsstProfPoliticalStudies@Bard, and Ian, CityUniversityHongKong, Fellow@ISEAS, “Between Acquisition and Use: Assessing the Likelihood of Nuclear Terrorism,” International Studies Quarterly, Volume 62, Issue 2) BW

Externally, in a world post-nuclear attack, international cooperation would be instant and deep. One of the only international treaties to even define a terrorist in international law post-2001 has been the Nuclear Terrorism Convention (Edwards 2005). A nuclear attack would be far outside the norm of international politics. It would disrupt the dominance of state-actors and likely stimulate unparalleled cooperation to apprehend the responsible parties to prevent future attacks. Moreover, many large terrorist organizations require (some) tacit acquiescence by a host state. Even those with hostile host states have territory where they remain relatively unaffected by local governments (Korteweg 2008). Post-nuclear attack, these host states face an enormous incentive to find the actors responsible before the target state does. After an attack, regimes would find it difficult to claim that they “didn't know” or “couldn't stop them.” Claims of corruption or ineffective institutions would be unlikely to find much sympathy. Faced with potential organizational extinction itself, a host state/government will likely be much less committed to the survival of the terrorist group. This is likely to vary significantly from how they might otherwise behave after a more conventional attack. For these states, there would be a real fear of “Talibanization” and ruthless attempts at regime change post-attack. From the perspective of the group, it would know that it could be facing a unified international community and the removal of tacit state support. It would take a particularly confident leadership to presume it could continue to function post-attack without massive disruptions. Most strategic actors are risk-averse when facing the potential of complete elimination. There is little reason to believe terrorist groups would act any differently.

### AT Accidents

#### Consensus of studies prove no accidents

Sechser ‘9 (Todd, Assistant Prof. Politics—UVA and PhD Pol.. Sci.—Stanford, in “Controversies in Globalization: Contending Approaches to International Relations”, Ed. John A. Hird, Peter M. Haas and Beth McBratney, p. 169-171)

The evidence in the previous section tells against the view that the spread of nuclear weapons engenders instability. Yet proliferation pessimists nonetheless point to a very large body of empirical support for their arguments. Through years of painstaking archival research, scholars such as Bruce G. Blair (1994), Peter D. Feaver (1997), and especially Scott D. Sagan (1993) have amassed an extraordinary collection of "near-catastrophes"—incidents that almost resulted in nuclear accidents or outright nuclear war—that occurred in the United States, China, India, Pakistan, and elsewhere during the Cold War and afterward. Sagan and Josh Weddle, for instance, write of military officers who sought to provoke war with aspiring nuclear rivals, organizational missteps that inadvertently left nuclear forces vulnerable to attack, and blunders that nearly led to accidental nuclear detonations or launches. 3 While doubtless worrisome, nuclear near-misses are insufficient to corroborate proliferation pessimism because they provide no information about the risk of actual accidents. Consider the following analogy. Imagine that an insurance company official is assigned to evaluate the accident risk for cars that use a particular brand of tires. After interviewing customers who have used these tires for many years, she writes a report concluding that clients using the tires in the future will suffer a high risk of accidents. She bases her conclusion on reports that customers' cars sometimes skidded while taking tight turns or when stopping rapidly, although none of the customers in her study ever experienced an actual crash. Would the researcher's conclusion be a reasonable inference from her data? It would not. The reason is that in the researcher's sample, experiencing skidding—that is, a "near-accident"—was not in fact associated with a higher likelihood of an actual accident. Cars that skidded had exactly the same likelihood of being involved in a crash—zero—as those that did not skid. Without having studied any actual crashes, the researcher can draw no inferences about the relationship between skidding and accidents. It may seem like common sense to assume that skidding cars have a greater likelihood of crashing, but intuition is no substitute for empirical data. Indeed, just the opposite might be true: perhaps skidding provides such a jolt to drivers that they become more cautious and attuned to road conditions as a result of the skid, thereby making a subsequent crash less likely. So it is with the study of nuclear proliferation. Since none of the close calls in the sample collected by proliferation pessimists led to an actual nuclear detonation, it is inappropriate to infer that close calls raise the likelihood of nuclear accidents. 4 The only conclusion supported by such data is that states possessing nuclear weapons have a greater likelihood of near- misses than nonnuclear states. But near-misses, while dramatic and unnerving, are ultimately of little consequence if they never escalate to outright catastrophes.

### AT Cyberattacks

#### Attacks are too hard

Rebecca **Slayton 17**, Assistant Professor at Cornell University with a joint appointment in the Science and Technology Studies Department and the Judith Reppy Institute for Peace and Conflict Studies., Slayton, Rebecca. “What Is the Cyber Offense-Defense Balance? Conceptions, Causes, and Assessment.” International Security, vol. 41, no. 3, Jan. 2017, pp. 72–109.

Conclusion This article has shown that widespread claims about the offense dominance of cyberspace are fundamentally flawed; the offense-defense balance can be understood only in the context of specific adversaries with distinctive goals and levels of capability in managing complex information technology. In many cases, particularly those in which the goal is to achieve complex kinetic effects, cyber operations may well be less costly for the defense than the offense I have presented this argument in four parts. First, I have argued that conceptions of offensive advantage need to include valuations of the goals as well as the costs of cyber operations. The goals of cyber operations are much more varied than are battles for territory and may include propaganda, espionage, counter-espionage, and sabotage, in addition to assistance with territorial military operations. This article has focused on the relative utility of offense and defense—the value of the goals of offense less the costs of offense, and the value of the goals of defense less the costs of defense. A more complete analysis would consider expected utility—that is, it would include the probability of success for offense or defense as a function of offensive and defensive expenditures. The statistics for empirically predicting the probability of success for offense or defense under various conditions do not exist, however, and there is reason to doubt that such calculations will reach a useful level of accuracy or precision. Nonetheless, decisionmakers’ beliefs about the probability of success will shape behavior, and thus both theoretical and empirical analysis of the factors that make cyber offense and defense costly and valuable is crucial to informing policy. Second, I have theorized what makes cyber operations costly and valuable, arguing that the resulting offense-defense balance is a characteristic not of cyberspace, but rather of the relationship between two adversaries; the balance is not systemic, but dyadic. Although software does have an essential characteristic—arbitrary complexity—which provides the offense with many vulnerabilities to exploit, technology alone does not determine the balance. Nor is technology one of several independent factors to be summed up in a net assessment. Instead, it is the processes that govern the interactions between skilled users and technology that determine an organization’s readiness for offense or defense. Research on the capability maturity model shows that the cost of managing complex software decreases as the maturity of an organization’s processes increases. Nonetheless, cost grows with complexity. The skills and organizational capabilities needed for offense and defense are very similar, but offensive capabilities often require less coordination and therefore are less costly than defensive operations. Nonetheless, an offensive operation that aims to precisely control a complex system is much more difficult than one that merely aims to disrupt the system, and may be costlier than defense. Additionally, the advantages that complex software offers attackers diminish rapidly at the “edges” of cyberspace, where computers are used to control physical systems, because knowledge of the physical systems is needed to exercise careful control. Such knowledge is often tacit and therefore unavailable through cyber espionage. Thus, although information technology offers unprecedented efªciency for espionage, it is not the most cost-effective means of destruction. Cyberweapons are primarily advantageous for their covertness, and they become expensive when physical systems are the target.

#### No cyber impact---empirics

James Andrew Lewis 18, senior vice president at the Center for Strategic and International Studies, Ph.D. from the University of Chicago, January 2018, “Rethinking Cybersecurity: Strategy, Mass Effect, and States,” <https://espas.secure.europarl.europa.eu/orbis/sites/default/files/generated/document/en/180108_Lewis_ReconsideringCybersecurity_Web.pdf>, p. 7-11

The most dangerous and damaging attacks required resources and engineering knowledge that are beyond the capabilities of nonstate actors, and those who possess such capabilities consider their use in the context of some larger strategy to achieve national goals. Precision and predictability—always desirable in offensive operations in order to provide assured effect and economy of force—suggest that the risk of collateral damage is smaller than we assume, and with this, so is the risk of indiscriminate or mass effect. State Use of Cyber Attack Is Consistent with Larger Strategic Aims Based on a review of state actions to date, cyber operations give countries a new way to implement existing policies rather than leading them to adopt new policy or strategies. State opponents use cyber techniques in ways consistent with their national strategies and objectives. But for now, cyber may be best explained as an addition to the existing portfolio of tools available to nations. Cyber operations are ideal for achieving the strategic effect our opponents seek in this new environment. How nations use cyber techniques will be determined by their larger needs and interests, by their strategies, experience, and institutions, and by their tolerance for risk. Cyber operations provide unparalleled access to targets, and the only constraint on attackers is the risk of retaliation—a risk they manage by avoiding actions that would provoke a damaging response. This is done by staying below an implicit threshold on what can be considered the use of force in cyberspace. The reality of cyber attack differs greatly from our fears. Analysts place a range of hypothetical threats, often accompanied by extreme consequences, before the public without considering the probability of occurrence or the likelihood that opponents will choose a course of action that does not advance their strategic aims and creates grave risk of damaging escalation. Our opponents' goals are not to carry out a cyber 9/11. While there have been many opponent probes of critical infrastructure facilities in numerous countries, the number of malicious cyber actions that caused physical damage can be counted on one hand. While opponents have probed critical infrastructure networks, there is no indication that they are for the purposes of the kind of crippling strategic attacks against critical infrastructure that dominated planning in the Second World War or the Cold War. Similarly, the popular idea that opponents use cyber techniques to inflict cumulative economic harm is not supported by evidence. Economic warfare has always been part of conflict, but there are no examples of a country seeking to imperceptibly harm the economy of an opponent. The United States engaged in economic warfare during the Cold War, and still uses sanctions as a tool of foreign power, but few if any other nations do the same. The intent of cyber espionage is to gain market or technological advantage. Coercive actions against government agencies or companies are intended to intimidate. Terrorists do not seek to inflict economic damage. The difficulty of wreaking real harm on large, interconnected economies is usually ignored. Economic warfare in cyberspace is ascribed to China, but China's cyber doctrine has three elements: control of cyberspace to preserve party rule and political stability, espionage (both commercial and military), and preparation for disruptive acts to damage an opponent's weapons, military information systems, and command and control. "Strategic" uses, such as striking civilian infrastructure in the opponent's homeland, appear to be a lower priority and are an adjunct to nuclear strikes as part of China's strategic deterrence. Chinese officials seem more concerned about accelerating China's growth rather than some long-term effort to undermine the American economy.6 The 2015 agreement with the United States served Chinese interests by centralizing tasking authority in Beijing and ending People's Liberation Army (PLA) "freelancing" against commercial targets. The Russians specialize in coercion, financial crime, and creating harmful cognitive effect—the ability to manipulate emotions and decisionmaking. Under their 2010 military doctrine on disruptive information operations (part of what they call "New Generation Warfare"). Russians want confusion, not physical damage. Iran and North Korea use cyber actions against American banks or entertainment companies like Sony or the Sands Casino, but their goal is political coercion, not destruction. None of these countries talk about death by 1000 cuts or attacking critical infrastructure to produce a cyber Pearl Harbor or any of the other scenarios that dominate the media. The few disruptive attacks on critical infrastructure have focused almost exclusively on the energy sector. Major financial institutions face a high degree of risk but in most cases, the attackers' intent is to extract money. There have been cases of service disruption and data erasure, but these have been limited in scope. Denial-of-service attacks against banks impede services and may be costly to the targeted bank, but do not have a major effect on the national economy. In all of these actions, there is a line that countries have been unwilling to cross. When our opponents decided to challenge American "hegemony," they developed strategies to circumvent the risks of retaliation or escalation by ensuring that their actions stayed below the use-of-force threshold—an imprecise threshold, roughly defined by international law, but usually considered to involve actions that produce destruction or casualties. Almost all cyber attacks fall below this threshold, including, crime, espionage, and politically coercive acts. This explains why the decades-long quest to rebuild Cold War deterrence in cyberspace has been fruitless. It also explains why we have not seen the dreaded cyber Pearl Harbor or other predicted catastrophes. Opponents are keenly aware that launching catastrophe brings with it immense risk of receiving catastrophe in return. States are the only actors who can carry out catastrophic cyber attacks and they are very unlikely to do so in a strategic environment that seeks to gain advantage without engaging in armed conflict. Decisions on targets and attack make sense only when embedded in their larger strategic calculations regarding how best to fight with the United States. There have been thousands of incidents of cybercrime and cyber espionage, but only a handful of true attacks, where the intent was not to extract information or money, but to disrupt and, in a few cases, destroy. From these incidents, we can extract a more accurate picture of risk. The salient incidents are the cyber operations against Iran's nuclear weapons facility (Stuxnet), Iran's actions against Aramco and leading American banks, North Korean interference with Sony and with South Korean banks and television stations, and Russian actions against Estonia, Ukrainian power facilities, Canal 5 (television network in France), and the 2016 U S. presidential elections. Cyber attacks are not random. All of these incidents have been part of larger geopolitical conflicts involving Iran, Korea, and the Ukraine, or Russia's contest with the United States and NATO. There are commonalities in each attack. All were undertaken by state actors or proxy forces to achieve the attacking state's policy objectives. Only two caused tangible damage; the rest created coercive effect, intended to create confusion and psychological pressure through fear, uncertainty, and embarrassment. In no instance were there deaths or casualties. In two decades of cyber attacks, there has never been a single casualty. This alone should give pause to the doomsayers. Nor has there been widespread collateral damage.

### AT Miscalc

#### Miscalc is unlikely – Cold War proves nuclear weapons launch won’t happen without a credible threat.

Graff ‘17 (Garrett M. Graff; American journalist and author. He is a former editor of Politico Magazine, editor-in-chief of Washingtonian magazine in Washington, D.C., and instructor at Georgetown University in the Masters in Professional Studies Journalism and Public Relations program; 8-18-2017; "Perspective"; https://www.washingtonpost.com/outlook/would-the-president-actually-order-the-use-of-nuclear-weapons/2017/08/18/a7ff0ed8-837d-11e7-ab27-1a21a8e006ab\_story.html, Washington Post, accessed 12-4-2019; JPark)

The exercises led Walrath to **doubt** that in **the heat of the moment**, faced with the horror of a global thermonuclear war, the United States would ever actually launch weapons. In every training exercise, the “president” would wait at least **until** missiles hit the United States before ordering retaliation. Often, he or she would not order a strike at all, watching as the scenario unfolded and the United States was obliterated. “I always wondered, if the Soviets had had any idea how reluctant we were to launch a missile, they might’ve felt entirely different,” Walrath says. “It wasn’t unusual to do nothing at all in response.” Walrath’s observation has hung over nuclear war planning for generations. There’s almost no question that, if ordered to do so, the military chain of command would execute a valid launch order quickly and decisively. But what if the president would never issue such an order? What if nuclear deterrence, the cornerstone of security for decades, is a hollow promise, perhaps on both sides? Presidents and heads of nuclear states have always played their cards close to their chests — the entire idea of deterrence would collapse if adversaries knew they could attack with impunity. But there’s plenty of evidence from the Cold War that nuclear war was literally **unthinkable**, that the men in charge might never have pushed the button. That question is worth revisiting today, as President Trump and Kim Jong Un stare each other down across the Pacific, each wondering if the other would launch a nuclear strike. Even as the latest rhetorical fireworks appear to have passed, more tense moments no doubt lie ahead if North Korea continues its efforts to master a nuclear-topped intercontinental ballistic missile. But the eventual launch of such a missile is **far from a sure thing**. Indeed, the evidence from the Cold War perhaps offers some comfort that at the decisive moment, one or even both sides might blink and step back from the abyss. Cold War presidents devoted extensive time to **understanding** the nuclear arsenal and sitting in on exercises — though by tradition, commanders in chief didn’t play the role of the president, to ensure that they never tipped their hand about how they’d respond to a real crisis. [Presidents have too much power over U.S. nukes. Especially President Trump.] In May 1969, Richard Nixon flew aboard that presidential “doomsday plane.” In its conference room, the battle staff led him through an **exercise** modeling the execution of **SIOP**, the Single Integrated Operational Plan, which served as the nation’s nuclear war plan. “Pretty scary. They went through the whole intelligence operational briefing and a test exercise — with interruptions to make it realistic,” White House Chief of Staff H.R. Haldeman wrote in his diary that night. “Took P a while to get into the thing (his mind was on the peace plan) but he finally did — and was quite interested. Asked a lot of questions re: our nuclear capability — and kill results. Obviously worries about the lightly tossed-about millions of deaths.” Afterward, national security adviser Henry Kissinger knew that **Nixon** would **never push the button**. The president had been so chastened by the exercise that he would never launch such an insane all-out war. As Kissinger cautioned behind closed doors after Nixon heard about SIOP, “If that’s all there is, he won’t do it.” If true, Nixon’s approach might not have been out of line with that of his predecessors. Harry **Truman**, the only man in history to order a nuclear weapon’s use, cut short one Oval Office debate about **military vs. civilian authority** over the bomb. “You have got to understand that this isn’t a military weapon,” Truman said. “. . . It is used to wipe out women and children and unarmed people, and not for military uses. So we have got to treat this differently from rifles and cannon and ordinary things like that.” During a January 1956 meeting on war planning at the White House, Dwight **Eisenhower** aggressively confronted his advisers. None of them, he complained, “had withdrawn into a quiet room and contemplated . . . the real nature of a future thermonuclear war.” No one, he said, could imagine “the chaos and destruction which such a war would entail.” There would be no winner. “The destruction,” the president told the group, “might be such that we might have ultimately to go back to bows and arrows.” In another meeting, Eisenhower argued that nuclear war was **not a real option**, and thus widespread, serious planning for it was a waste of time and money. It wasn’t merely a matter of building better weapons or deeper shelters if a nuclear conflict came: “There just aren’t enough bulldozers to scrape the bodies off the street.” For his part, Lyndon **Johnson** lived in **fear** of the button. “When Richard Nixon took the oath,” Johnson recounted, “the greatest burden lifted from me that I have ever carried in my life.” He explained, “Never a day went by that I wasn’t frightened or scared that I might be the man that started World War III.” [No one can stop President Trump from using nuclear weapons. That’s by design.] Contemplating the reality of World War III in 1983 led Ronald Reagan to dramatically shift his approach to the Cold War. That fall, he finally sat through a SIOP exercise — he’d long delayed it, saying there wasn’t much point in practicing nuclear war — and also watched the ABC doomsday movie “The Day After.” The much-hyped film starred Jason Robards and followed the residents of Lawrence, Kan., through the awful process of piecing society back together after a nuclear attack obliterates America; graphic and violent in ways that were new for TV depictions of nuclear war, the movie’s four-minute attack sequence and the death, maiming and destruction that followed were meant to leave viewers unsettled. And the film deeply affected Reagan. “It is powerfully done,” he wrote in his diary. “It’s very effective and left me greatly depressed. . . . My own reaction was one of our having to do all we can to have a deterrent & see there is never a nuclear war.” Reagan biographer Edmund Morris later reported that it was the “first and only admission I have been able to find in his papers” that the president was ever “depressed.” Reckoning with war as he did that fall led Reagan to dramatically alter course, toning down his “evil empire” rhetoric about the Soviet Union. These realizations that nuclear war was not a real option didn’t occur only in the United States. Former French president François **Mitterrand** once said he doubted that **any French leader** would have launched that nation’s nuclear weapons. The only British prime minister who has ever spoken publicly about the question, James **Callaghan**, who served from 1976 to 1979, recalled “**terrible doubts**” about whether he’d ever have ordered a strike: “If I had lived after having pressed that button, I could never, ever have forgiven myself.” The clearest misgivings, though, were expressed by the man who “blinked” in the showdown with John F. Kennedy during the Cuban missile crisis. When he took over the Soviet Union at the height of the Cold War, Nikita **Khrushchev** received the standard briefing about his nation’s nuclear authority. It left him shaken. “I couldn’t sleep for several days,” he recounted later. “Then I became convinced that we could **never possibly** **use** these weapons, and when I realized that I was able to sleep again.” Khrushchev’s words offer some comfort that Kim Jong Un might understand the dirty secret of the Cold War: The entire point of building nuclear weapons is to ensure that you never have to use them.

#### No use/lose pressure or preventive or accidental war

Cohen 17 (Michael, Ph.D. at the University of British Columbia in April 2012 Assistant Professor in the Department of Political Science and Public Management at the University of Southern Denmark "How nuclear proliferation causes conflict: the case for optimistic pessimism" The Nonproliferation Review Volume 23, 2016 - Issue 3-4: Twenty years of the Comprehensive Nuclear-Test-Ban Treaty)

Sagan has argued that the dangers caused by preventive-war motivations did not disappear in 1990 with India's and Pakistan's development of nuclear weapons, because future deployment of US national missile defenses would likely cause China to increase the size and readiness of its own missile force, encouraging India to increase its own missile deployments and defense technology, which in turn threatens Pakistan's smaller nuclear arsenal. According to Sagan, this would “inevitably reopen the window of opportunity for preventive war considerations.”29 Pakistani nuclear posture has indeed given a larger role to nuclear weapons.30 But even if the United States, China, and India increase their missile forces, the logic that has almost always ensured that preventive-war considerations do not come to fruition will likely prevail. Arms races usually do not cause war.31 The scenario of a general gaining supreme political power and ordering a preventive strike due to pressures created by missile defenses on a “better-now-than-later logic” when the consequences might be the loss of several cities has not occurred. Pakistani fears of attacks on their nuclear arsenal during the 2001–02 South Asian standoff say nothing about whether India was actually planning such attacks.32 After the December 13, 2001, terrorist attacks, Indian Army General Sundararajan Padmanabhan stated that “if we go to war, jolly good,” though whether Prime Minister Atal Bihari Vajpayee seriously considered striking Pakistani nuclear facilities is unclear. Almost all states do not move beyond considering preventive attacks against their adversary's nuclear weapon facilities. The only cases where preventive-war motivations led to strikes are the Israeli, US, and UK attacks against Iraq in 1981, 1993, and 1998, and these strikes did not escalate to war. Proliferation pessimist scholars have not explained why the rise of new nuclear powers might lead not only to preventive-war motivations but also actual strikes. There are strong reasons why few strikes occur and these do not escalate to war. Military biases and preferences for preventive strikes hardly ever become realized. Cases of strikes authorized by civilian leaders are rare. Given the near-absence of preventive strikes, and notwithstanding the rare strikes that nonetheless fail to escalate conflict further, it is clear that the dangers of preventive strikes associated with nuclear proliferation have been exaggerated.

#### Reject the aff’s alarmism—nuclear crises have been historically overstated

Tetrais ‘17 Bruno Tetrais (Deputy Director at the Fondation pour la recherche stratégique. He was the Special Assistant to the Director of Strategic Affairs at the French Ministry of Defense between 1993-2001, a Visiting Fellow at RAND Corporation in 1995-96, and Director of the Civilian Affairs Committee at the NATO Parliamentary Assembly between 1990-1992). “‘On The Brink’—Really? Revisiting Nuclear Close Calls Since 1945.” The Washington Quarterly, 40:2, 51-66, 2017. JDN. https://www.tandfonline.com/doi/full/10.1080/0163660X.2017.1328922

Why have nuclear weapons not been used since 1945? The more time passes, the more the question becomes relevant and even puzzling for pessimists. Most strategists of the 1960s would be stunned to hear that as of 2017, there still has yet to be another nuclear use in anger. The prospects of a “nuclear weapons ban” or recurring proposals for “de-alerting”—instituting changes that can lengthen the time required to actually use the weapons—make the question even more relevant. Has mankind really stood “on the brink” several times since Nagasaki, and have we avoided nuclear catastrophe mostly because of pure “luck”? 1 Recent books, articles, and reports, as well as two wide-audience documentaries, say yes.2 This is not the case. The absence of any deliberate nuclear explosion (except for testing) since 1945 can simply be explained by human prudence and the efficiency of mechanisms devoted to the guardianship of nuclear weapons. Banning nuclear weapons may or may not be a good idea. But it should not be based on the myth of an inherently and permanently high risk of nuclear use. The analysis that follows covers the deliberate use of nuclear weapons by a legitimate authority, either by error (“false alarm”) or not (“nuclear crisis”). It does not cover the risk of an accidental nuclear explosion, an unauthorized launch, or a terrorist act.3 It covers 37 different known episodes, including 25 alleged nuclear crises and twelve technical incidents, which have been mentioned in the literature to one degree or another as potentially dangerous.4 The short answer? If we are to discard Pope John Paul II’s explanation (“Divine Providence”),5 it is that the system worked and that, with rare exceptions, those in charge of nuclear weapons have been responsible, prudent, and careful. “Close calls” have ranged in fact from “not-so-close” to “very distant.”

## 1NC – ! Defense

### No Extinction

#### Nuke war is overstated—talk of extinction is alarmist.

Eken 17 [Mattias Eken, PhD Candidate in Modern History, University of St Andrews, 3-14-2017, "The understandable fear of nuclear weapons doesn't match reality," Conversation, <https://theconversation.com/the-understandable-fear-of-nuclear-weapons-doesnt-match-reality-73563>] AG

Claims exaggerating the effects of nuclear weapons have become commonplace, especially after the September 11 terrorist attacks in 2001. In the early War on Terror years, Richard Lugar, a former US senator and chair of the Senate Foreign Relations Committee, argued that terrorists armed with nuclear weapons pose an existential threat to the Western way of life. What he failed to explain is how. It is by no means certain that a single nuclear detonation (or even several) would do away with our current way of life. Indeed, we’re still here despite having nuked our own planet more than 2,000 times – a tally expressed beautifully in this video by Japanese artist Isao Hashimoto). While the 1963 Limited Test Ban Treaty forced nuclear tests underground, around 500 of all the nuclear weapons detonated were unleashed in the Earth’s atmosphere. This includes the world’s largest ever nuclear detonation, the 57-megaton bomb known as Tsar Bomba, detonated by the Soviet Union on October 30 1961. Tsar Bomba was more than 3,000 times more powerful than the bomb dropped on Hiroshima. That is immense destructive power – but as one physicist explained, it’s only “one-thousandth the force of an earthquake, one-thousandth the force of a hurricane”. The Damascus incident proved how incredibly hard it is to set off a nuclear bomb and the limited effect that would have come from just one warhead detonating. Despite this, some scientists have controversially argued that an even limited all-out nuclear war might lead to a so-called nuclear winter, since the smoke and debris created by very large bombs could block out the sun’s rays for a considerable amount of time. To inflict such ecological societal annihilation with weapons alone, we would have to detonate hundreds if not thousands of thermonuclear devices in a short time. Even in such extreme conditions, the area actually devastated by the bombs would be limited: for example, 2,000 one-megaton explosions with a destructive radius of five miles each would directly destroy less than 5% of the territory of the US.

#### No Nuke Winter - Superior studies- theirs are confirmation-bias laden and repeatedly disproven

S. Fred **Singer 18**. Professor emeritus at the University of Virginia and a founding director and now chairman emeritus of the Science & Environmental Policy Project, specialist in atmospheric and space physics, founding director of the U.S. Weather Satellite Service, now part of NOAA, served as vice chair of the U.S. National Advisory Committee on Oceans &amp; Atmosphere, an elected fellow of several scientific societies, including APS, AGU, AAAS, AIAA, Sigma Xi, and Tau Beta Pi, and a senior fellow of the Heartland Institute and the Independent Institute. 6-27-2018. "Remember Nuclear Winter?." American Thinker. https://www.americanthinker.com/articles/2018/06/remember\_nuclear\_winter.html

Nuclear Winter burst on the academic scene in December 1983 with the publication of the hypothesis in the prestigious journal Science. It was accompanied by a study by Paul Ehrlich, et al. that hinted that it might cause the extinction of human life on the planet. MCANW stands for Medical Campaign Against Nuclear Weapons. Photo via Wellcome Images. The five authors of the Nuclear Winter hypothesis were labeled TTAPS, using the initials of their family names (T stands for Owen Toon and P stands for Jim Pollak, both Ph.D. students of Carl Sagan at Cornell University.) Carl Sagan himself was the main author and driving force. Actually, Sagan had scooped the Science paper by publishing the gist of the hypothesis in Parade magazine, which claimed a readership of 50 million! Previously, Sagan had briefed people in public office and elsewhere, so they were all primed for the popular reaction, which was tremendous. Many of today's readers may not remember Carl Sagan. He was a brilliant astrophysicist but also highly political. Imagine Al Gore, but with an excellent science background. Sagan had developed and narrated a television series called Cosmos that popularized astrophysics and much else, including cosmology, the history of the universe. He even suggested the possible existence of extraterrestrial intelligence and started a listening project called SETI (Search for Extraterrestrial Intelligence). SETI is still searching today and has not found any evidence so far. Sagan became a sort of icon; many people in the U.S. and abroad knew his name and face. Carl Sagan also had another passion: saving humanity from a general nuclear war, a laudable aim. He had been arguing vigorously and publicly for a "freeze" on the production of more nuclear weapons. President Ronald Reagan outdid him and negotiated a nuclear weapons reduction with the USSR. In the meantime, much excitement was stirred up by Nuclear Winter. Study after study tried to confirm and expand the hypothesis, led by the Defense Department (DOD), which took the hypothesis seriously and spent millions of dollars on various reports that accepted Nuclear Winter rather uncritically. The National Research Council (NRC) of the National Academy of Sciences published a report that put in more quantitative detail. It enabled critics of the hypothesis to find flaws – and many did. The names Russell Seitz, Dick Wilson (both of Cambridge, Mass.), Steve Schneider (Palo Alto, Calif.), and Bob Ehrlich (Fairfax, Va.) (no relation to Paul Ehrlich) come to mind. The hypothesis was really "politics disguised as science." The whole TTAPS scheme was contrived to deliver the desired consequence. It required the smoke layer to be of just the right thickness, covering the whole Earth, and lasting for many months. The Kuwait oil fires in 1991 produced a lot of smoke, but it rained out after a few days. I had a mini-debate with Sagan on the TV program Nightline and published a more critical analysis of the whole hypothesis in the journal Meteorology & Atmospheric Physics. I don't know if Carl ever saw my paper. But I learned a lot from doing this analysis that was useful in later global warming research. For example, the initial nuclear bursts inject water vapor into the stratosphere, which turns into contrail-like cirrus clouds. That actually leads to a strong initial warming and a "nuclear summer."

### AT Iran + Saudi

#### No Saudi OR Iran prolif

Ian **Stewart &** Dominic **Williams 15**. Senior Research Fellows in the Department of War Studies at King’s College London. 05-23-15. “Is Saudi Arabia trying to get nuclear weapons?” Telegraph. http://www.telegraph.co.uk/news/worldnews/middleeast/saudiarabia/11617339/Is-Saudi-Arabia-trying-to-get-nuclear-weapons.html

Perhaps the main strategic driver relates to the P5+1’s nuclear negotiations with Iran. Saudi Arabia is one of Iran’s main regional competitors and there have long been concerns that if Iran acquired nuclear weapons other countries in the region would follow. Iran is not on the brink of acquiring nuclear weapons, however, and the negotiations currently taking place with a deadline of mid-summer could leave Iran even further from nuclear weapons than it has been for the last several years. In this context, it is important to note that the Saudi leadership has generally expressed approval for a nuclear deal with Iran. If the negotiations with Iran have triggered a renewed interest in nuclear weapons in Saudi Arabia, it is perhaps more likely that the Saudi royals are seeking to use their apparent interest in acquiring them in order to influence the negotiations rather than seeking nuclear weapons for their own use. It is also possible that Saudi’s calculus regarding nuclear weapons has changed for other reasons. One possible reason for this could be changes in the country’s leadership. King Salman’s enthronement has brought changes to the country’s approach to foreign policy and the appointment of the his son as defence minister has resulted in the country taking unusually bold action against Iran-backed forces in Yemen. It cannot be ruled out that the new leadership, unafraid of bold policy choices in pursuit of the country’s international security goals, could also decide to acquire nuclear weapons. Even if Saudi was to decide to do so, however, it is far from clear that the country is capable of acquiring nuclear weapons. After all, the country’s own nuclear infrastructure is nascent and orientated towards civil purposes. More plausibly, following a deal between the P5+1 and Iran, Saudi Arabia could seek to exercise the same right to enrich uranium that Iran claims for its own program as part of a nuclear hedging strategy. Supplier restraint in relation to transfers of enrichment technology mean that it is unlikely that Saudi could buy such a capability outright. The country does have some of the prerequisite industry to embark on an indigenous effort, however, which would be a longer term proposition (likely lasting some decades). The second possibility would be for Saudi to acquire weapons ‘off the shelf’ from Pakistan. The likelihood of this scenario is difficult to quantify: certainly, Pakistan and Saudi Arabia have a unique relationship. However, would Pakistan be willing to proliferate? Pakistan is still struggling to overcome the damaged international reputation it suffered as a result of the actions of AQ Khan, who passed on the country’s uranium enrichment and possibly nuclear weapons designs to at least three countries include Libya, Iran and North Korea. Pakistan has enacted a systematic export controls to prevent such a recurrence (although there is some question about how well this system functions as it is understood that no licences for authorised transfers of any nuclear technology have been granted). It is also likely that Chinese pressure would restrain Pakistan from transferring nuclear weapons to Saudi Arabia: China is currently subject to intense diplomatic pressure over its decision to sell nuclear reactors to Pakistan. Should an egregious nuclear transfer take place from Pakistan, the prospects of such civil nuclear cooperation, which is important to Pakistan’s own development, would be bleak. Finally, there are also practical hurdles over transferring nuclear weapons from Pakistan to Saudi Arabia (perhaps the least of which is the US 5th fleet).

### AT Iran

#### **Iran Offensive Realist – aff can’t solve**

Koberidze 19 [Giorgi Koberidze (Assistant to the Chief of Defence Forces (Georgia) Assistant to the Chief of Defence Forces (Georgia) at Georgian Defence Forces), Foreign Policy Council, “Iran Offensive Realist”, February 16th 2019, <https://foreignpolicycouncil.com/2019/02/16/iran-offensive-realist/>, acc 12/16/19, Rohan R)

After the Islamic Revolution in 1979, Iran has become aggressive towards her neighbours, Israel and the US. The Internation of the new Islamic government in Tehran was a transfer of the Islamic revolution across the Middle East and through this becoming the regional leader. This project failed for one simple reason: Iran is Shia in the predominantly Sunni region. War with Iraq was the trigger to nationalism in Iran, which replaced or filed religious fervour in Iran. The war was a logical sequel of Iran’s failed attempt to seize the power in the Middle East, especially mostly Shia Iraq, with the Sunni government. The Islamic revolution and its transfer was not Iran’s only attempt to get her influence over Iraq: since the US invasion in Iraq, Iran actively tries to bolster her positions. She was willing to help new, mainly Shia Iraqi government and paramilitary forces to wage war against Sunni insurgencies and then ISIL. Sectarian conflicts was a breeding ground for Iran’s ambitious projects. During the so-called Arab Spring Iran actively supported Shia forces to toppled Sunni governments Yemen and Bahrain, though the latter was unsuccessful. Different gamble was played elsewhere: Iran consistently securing Al-Assad’s positions in Syria, where Iran military is present. Same is happening in Hezbollah’s in Lebanon. But why Iran was tried and still actively trying to gain as much influence as it gets it? Before the US invasion in Iraq, Iran, which aspired to become a regional power, aware that she was surrounded by hostile governments. All of them was either Sunni or non-friendly Shia (Azerbaijan). All of them had one in common – hatred towards Iran. But after the fall of Iran’s nemesis – Iraqi Sunni dictator Saddam Hussein, Shia government in Iran saw fertile ground to act. Iran’s first objective was to secure Iraq as a friendly country. They successfully fulfiled it. Perspectives of the US withdrawal from their country and resurgent of the Sunni insurgency in the western provinces and then ISIL, prompt the Iraqi government to deepen existing ties with her former enemy – Iran. The second objective was Lebanon. In there Hezbollah which has civil and military branches operates as an anti-Israel, pro-Iranian political and military movement. With the active investment of Iran, Hezbollah gradually flourished and gained tangible ground. After the war with Israel in 2006, the prestige of Hezbollah grew in the islamic world, as well as Iran’s willingness to help them. But why Hezbollah? The organization mainly contains and represents the Shia from Lebanon. Therefore it is a natural ally of Iran. But it is not enough. Hezbollah has an aggressive stance against the US, Israel and the regional Sunni powers which cooperate to the West and Israel. All of those stances, not just a shared by Iran but it was Iran who staunchly promoted them after the year of 1979. Through them, Iran can mobilize people around the region which in the name of religious and political radicalization and discontent can start to fight against their governments, which secretly or openly cooperates to Israel and the West. Divide and Conquer – the Supposed motto of Iran’s foreign policies. This makes Iran a rogue state. The third objective was to cut direct Pro-Iranian, Shia trail toward the Mediterranean sea. In 2018 Iran successfully achieve her objective. Any government from Iran to the west, before the mediterranean sea, is predominantly Shia or ruled by pro-Iranian governments. Now, Iran’s military can directly use land-road to connect Hezbollah in Lebanon and impose threats to Israel. The fourth objective is complicated but achievable: Iran tries to further divide the Sunni world and focus their attention on domestic issues or neighbouring countries while Iran gradually strengthens her positions. The Saudi led war in Yemen and the mobilization of the Shia population in eastern Saudi Arabia near the economically profitable strain of Hormuz, are perfect baits which help Iran to act without suspension. But again, why is Iran willing to spend so many resources to topple the regional order? The answer lies within the International relation’s theory of Neorealism. According to it, the world is in constant anarchy, where the war always lies on horizons. If you, as a country want to secure your position then you should secure your interests and act, even in aggressively, if necessary. Last seven decades peace in international relations keep because of the active role of US and its aspiration to secure post-world war order. Since the dissolution of USSR, the US has been the only superpower in the world. This means that she should behave like a policeman to maintain stzable growth of democracies. Beyond that, any superpower should control which regional power grow and avoid to accumulate too much power for any country with aggressive intention. Iran is an alike country. Her ambitions to become regional power definitely contradicts the US-led order. This is why the US sees Iran as one of the main security threat for not just her international supremacy, but also achievable stability and balance of power in the Middle East. Russia intensively and also Turkey reluctantly, are willing to cooperate with Iran. That is because they also aspire to change the regional or even world orders. If Iran succeeds the US is no longer keep the power to secure even fragile peace in the Middle East, therefore redistribution of power is going to be palpable. Iran, as well as Russia and Turkey, are offensive realists who gradually changing the dynamics of the east and therefore the world. This is the main reason why the issue of Iran never got rid of from the subject of US foreign policy.

### AT East Asia Prolif

#### No East Asia prolif---regardless of security guarantees.

Brendan Rittenhouse **Green 18**. Assistant professor of political science at the University of Cincinnati. 01/29/2018. “Primacy and Proliferation: Why Security Commitments Don’t Prevent the Spread of Nuclear Weapons.” US Grand Strategy in the 21st Century: The Case For Restraint, Routledge.

But according to the large mass of literature in political science, primacy's syllogism is flawed. At its heart is the strong intuition that security concerns represent the core reason for acquiring nuclear weapons—an intuition many of the realist champions of restraint share. Yet if we are to take the mainstream of research on “demand side” drivers of proliferation seriously, then this motive is far less powerful than either the policymaking world or the grand strategy debate generally acknowledge. Author after author emphasizes instead the multiple and wide-ranging set of constraints that confront would-be proliferators. Even if US withdrawal were to increase regional insecurity, security concerns have high hills to climb in order to push states toward the fateful step of nuclear acquisition. Proliferation has been a historically slow and haphazard process, and is likely to remain so. Primacy’s arguments receive their strongest support from relatively recent, dissenting research. But this research—impressive as it is—cuts in multiple directions. If Monteiro and Debs are correct, then US commitments will incentivize nuclear proliferation as often as they deter it. The weak states that Washington’s mentorship are most likely to influence are also the least likely to proliferate if its protection is withdrawn. If Miller is correct, dominoes may indeed be more likely to fall than the literature suspects, but it is unclear how much more likely. If Hymans or Solingen is right, then there are strong internal impediments to proliferation even in the face of a regional state’s nuclear acquisition. Moreover, a number of sanctions will remain: available for influencing the calculations of would-be proliferators. Looking to the future, what can be said about the odds of proliferation in a world with greatly weakened alliance commitments? East Asia, where the chance of major war with a regional power is greatest, would appear to have a number of factors pushing against further proliferation after American withdrawal. Regional allies are dominated by internationalist, trade-oriented coalitions unlikely to risk the consequences of American economic coercion. While their legal-rational Weberian bureaucracies would likely make them more technically adept at weaponization, these same bureaucracies provide a number of veto points for any decision to do so. In any case, there are not so many oppositional nationalists in these democratic polities who might be willing to take the fateful leap. Finally, South Korea and Taiwan are weak, making them exposed to Chinese coercion without American protection. Beijing is not likely to look kindly on either state proliferating.

### AT Iran Prolif

#### Iran won’t go nuclear – barriers and deterrence.

Seitz ’16 (Sam; 3/2/2016; writer for Politics in Theory and Practice, specializing in analyzing International Relations and American Politics; “How Dangerous is a Nuclear Iran?” https://politicstheorypractice.wordpress.com/2016/03/02/nuclear-iran/; Date Accessed: 9/27/2016)

The most common argument that commentators who warn of a nuclear Iran make is that a revisionist, theocratic Iran would use their nukes to eliminate Israel. After all, former president Ahmadinejad pledged on many occasions to “wipe Israel off the map.” These statements are clearly concerning. There are nationalistic zealots in the country, and they have immense influence through the IRGC, the Guardian Council, and the Ayatollah’s office. Nevertheless, I think the risk of an Iranian nuclear attack is grossly overstated. History is replete with examples of leaders making empty threats. Indeed, Iranian leaders have on many occasions said outrageous things, yet they so far have not engaged in any large-scale attacks on the Jewish state. It’s important to remember that many leaders, especially those of nationalistic countries, are playing two-level games (this is meant in a game theory sense, not as in monopoly). Leaders must send signals to the outside world, but they also must send signals to their domestic base of support. Often, this results in muddled or confused messaging. For example, during the withdrawal from Iraq, Obama needed to simultaneously appease his domestic audience which opposed the war as well as deter the insurgent and terrorist networks in Iraq. Paradoxically, he needed to promise to pull out quickly while simultaneously signaling that the U.S. would fight as long as it needed to. A similar dynamic exists in Iran. The President of the Islamic Republic needs to both appease domestic hardliners who oppose any acquiescence to the West while also moderating Iranian foreign policy enough to limit sanctions and receive approval from the outside world. Thus, not every bombastic speech or threat should be taken at face value. More likely than not, these speeches are nothing more than red meat for the base, not actual grand strategy. The other reason that I am not too worried is that deterrence, at least at the nuclear level, seems to work very well. Despite endless posturing and brinksmanship during the Cold War, neither the U.S. nor the U.S.S.R. launched nuclear weapons. They knew that if they did, they would be destroyed in a hail of atomic fire. Say what you will about the Iranians, but I seriously doubt that the pampered elite of the Revolution care so much about Islam that they are willing to throw away their lives in a horrific death. Moreover, even if every Iranian is a zealot on the order of Al-Baghdadi (something I don’t buy for a second), it still doesn’t follow that they would use nukes. If they really valued their revolutionary ideology, they would want to spread Shia Islam throughout the world. That goal would become impossible if their country became a smoldering heap of radioactive glass. History is replete with madmen getting the bomb. Kruschev, Kim Jong-il, and Mao are just a few examples. Nevertheless, no matter how egotistical or ideological these leaders were, deterrence and sound military posturing ensured that they never used their deadly arsenals. Therefore, I have no reason to believe that deterrence wouldn’t work on Iran as well.

#### No Iran prolif – multiple barriers.

Larison ’14 (Daniel; 5/22/2014; online writer for The American Conservative; “Iran and the “Nuclear Domino” Myth,” <http://www.theamericanconservative.com/larison/iran-and-the-nuclear-domino-myth/>; Date Accessed: 9/18/2016)

Matthew Kroenig continues his never–ending series of articles promoting war with Iran. I’m not all that interested in his argument about Obama, but I wanted to respond to some assertions that he makes about what would happen after Iran acquired nuclear weapons. Kroenig writes: Nuclear weapons in Iran would spark a nuclear arms race in the Middle East. Tehran would probably export do-it-yourself atomic bomb kits to other countries around the world. And the global nonproliferation regime would collapse as it became clear that the international community lacked the resolve to stop the spread of the world’s most dangerous weapons. All of these claims are wrong. Johan Bergenas specifically addressed two of these claims in a 2010 article for Foreign Affairs. He rejected the idea that the nonproliferation regime would collapse because of a nuclear-armed Iran. On the NPT itself, he said: Its more than 180 committed parties are unlikely to allow Iran’s nuclear program to demolish an institution that is — and has been for four decades — the foundation of nonproliferation efforts. As for the fear of a “nuclear domino effect,” Bergenas cites past experience with new nuclear-weapons states to show this idea to be another myth: But there’s one problem with this “nuclear domino” scenario: the historical record does not support it. Since the dawn of the nuclear age, many have feared rapid and widespread nuclear proliferation; 65 years later, only nine countries have developed nuclear weapons. Notably, Israel’s acquisition of nuclear weapons has not prompted any of its neighbors to do likewise, nor has North Korea’s nuclear tests led to further proliferation in East Asia. If a state is determined to build nuclear weapons, the nonproliferation regime cannot prevent this from happening, but the strength of that regime is that is gives the vast majority of states incentives not to pursue such weapons. He continues: Predictions of catastrophic consequences resulting from a nuclear Iran are not only wrong but counterproductive. The assertion that the widespread proliferation is unavoidable could become a self-fulfilling prophecy. The myth of a nuclear domino effect creates an excuse for other Middle Eastern countries — expecting that their neighbors will be nuclear powers — to acquire nuclear weapons themselves. Iran hawks have to resort to these myths in order to make the extreme policy of preventive war seem more reasonable. It makes it easier to propose illegal military action as if it were a sensible alternative to catastrophe, when this would do nothing to prevent proliferation and would almost certainly guarantee the outcome that it is supposed to stop.

### AT Israel Strikes

#### No Israeli strike—they know the barriers are too high.

Isenberg, Adjunct National Security Fellow at the Cato Institute, ‘12 [David, “Israeli Attack on Iran’s Nuclear Facilities Easier Said than Done”, Asia Times, 2-15-12 <http://ipsnews.net/news.asp?idnews=106739>]

Despite renewed media speculation regarding possible Israeli attacks against Iran's nuclear facilities as early as this spring, scepticism that such a campaign could actually be successfully carried out remains relatively high, raising the question of whether there is more bark than bite to Israeli threats. It cannot expect a repeat of 1981 when the Israeli air force destroyed the Osirak reactor at Al-Tuwaythah, just south of Baghdad. The Iranians are aware of both Israeli capabilities and the U.S.-made precision-guided penetrating munitions in the Israeli inventory. The Iranian program has been dispersed all over the country — estimates range between 12 and more than 20 locations — and the facilities have been built with U.S. and Israeli capabilities in mind and are protected by modern Russian air defence systems. The single most critical element of the Iranian program is thought to be the Natanz facility. The heart of the facility is the centrifuge area, located in an underground, hardened structure. But even if Israel tries to limits the target set, it would still have to attack other facilities besides Natanz. For example, the newer Fordow fuel-enrichment plant near Qom, where Iran has already moved 3.5-percent enriched uranium from Natanz, is built into the side of a mountain and is heavily fortified. There is a uranium conversion plant at Isfahan, a heavy-water facility being constructed at Arak and centrifuge factories outside Tehran. The straight-line distance between Israel and Natanz is almost 1,609 kilometers. Since the countries do not share a common border, Israeli aircraft or missiles must fly through foreign — and hostile — airspace to get to the target. The least risky method of striking Natanz is with Israel's mediumrange ballistic missiles, the Jericho II or III. It is believed that the Israeli missiles can reach Natanz. However, to travel that far the missiles will have a limited warhead weight, and it is doubtful that these warheads will be able to penetrate far enough underground to achieve the desired level of destruction. Thus, an attack by the Israeli air force's U.S.-made fighter-bomber aircraft is the most likely option. The Israelis have 25 F-15I and about 100 F-16I jets. The F-15I is capable of carrying four metric tons of fuel in its internal tanks, conformal fuel tanks (CFT), and detachable tanks. This enables it to fly about 4,450 kilometers. With midair refueling, the range can be extended further. The F-15I can carry a very wide range of weapons such as various guided missiles and bombs, as well as iron bombs. All in all, the plane can carry about 10 metric tons of munitions. The F-16I has an extended flight range that reportedly allows Israeli forces to attack targets well within Iran without having to refuel. Use of CFT extends its effective mission range up to 50 percent. The baseline model has a combat radius of 1,370 kilometers with two 907-kilogram bombs and two air-to-air missiles, with 3,936-liter external tanks. Assuming an air attack, the question is how will the aircraft fly from their bases in Israel to a target located 322 kilometers inside Iran? They could go either through Saudi Arabia or Iraq, possibly even using Jordanian airspace as well. Either route is a one-way trip of about 1,931 kilometers. To overfly Saudi Arabia the strike aircraft depart southern Israel, enter Saudi airspace from the Gulf of Aqaba or Jordan, fly 1,287 kilometers of Saudi airspace to the Gulf and then 483 kilometers into Iran. Since the Israeli air force does not operate stealth aircraft, there is a reasonable expectation that at some point the aircraft will be detected over Saudi Arabia. Whether Saudi defences could — or would — be able to stop the Israelis is uncertain. Given Saudi fears over Iran's nuclear program, perhaps they would turn a blind eye and claim ignorance. If they chose to traverse Iranian airspace, the strike aircraft depart southern Israel, cross 483 to 644 kilometers of Saudi airspace or a combination of Jordanian and Saudi airspace, and enter Iraqi airspace as soon as possible, continue across 805 kilometers of Iraq to the Persian Gulf and then on to the target. Entering Iran from Iraqi airspace would be politically delicate. Although U.S. troops are no longer there, traversing Iraqi airspace would not be possible without the knowledge, and most likely the permission, of the United States. The key question is whether Israel's fighter-bombers can conduct this mission without refuelling. Combat radius — the distance an aircraft can fly and return without refueling — is difficult to calculate, and depends on weapons payload, external fuel tanks, mission profile, etc. The best "guesstimate" of the combat radius of the F-15I and F-16I, outfitted with conformal fuel tanks, two external wing tanks and a decent weapons load, is almost 1,609 kilometers. Either of the two possible flight routes above is about 322 kilometers further than that. To make up for the shortfall, the aircraft could be fitted with an additional external fuel tank, but this will require a reduction in the weapons load. Given the accuracy of the weapons in the Israeli inventory, that might not be problematic. However, if the aircraft are detected and intercepted, the pilots will have to jettison the tanks in order to engage their attackers. Dropping the tanks will prevent the aircraft from reaching their target. Air refuelling is a limitation for the Israelis. In recent years Israel has acquired five C-130 and four to seven Boeing 707 tanker aircraft. However, the tankers would have to refuel the fighters in hostile airspace. The 707 is a large unarmed aircraft and would be very vulnerable to air defences. Theoretically, the Israelis could do this, but at great risk of failure. If they decide to attack Natanz, they will have to inflict sufficient damage the first time — they probably will not be able to mount follow-on strikes at other facilities.

#### No draw in

Hennigan, 06 ( Jim, lawyer, The Beat, July 25, <http://www.metrobeat.net/gbase/Expedite/Content?oid=oid%3A3946>)

Israel may have gone “nuclear” over Hezbollah’s cross-border incursion to kidnap two Israeli soldiers (certainly if one takes the position that Hezbollah’s action must be viewed in isolation and not as the last straw), but it’s only figuratively speaking. Even if Israel were to use nuclear weapons ( I’m not betting on it), it’s unlikely to escalate into a worldwide war. The war in Lebanon beats none of the indicia of earlier incidents-from the good old days- where the world was truly on the brink of a third world war. Events like the Yom Kippur War ( or Arab- Israeli War of 1973) when a beleaguered Nixon facing down a constitutional crisis with Watergate delegated authority to his flag officer in the Sixth Fleet to use tactical nuclear weapons, if needed , to halt the Soviet-trained and- armed Egyptian and Syrian offensive. Or the Cuban Missile Crisis in which Nikita Khrushchev was only slightly less aggressive than Fidel Castro about whether to fire the nukes at America before they had to withdraw. Now those are a couple of bona fide World War-inspiring developments. To think that the world is teetering on the brink of a world war now seriously diminishes the gravity of the near-cataclysms the world has walked away from in the past. The events in Lebanon don’t hold a Polaris missile to a string of volatile situations over the past half century. Even though Hezbollah is Syria’s surrogate in yet another attempt by Syria to wage war against Israel, the nations of the world are not inextricably linked to supporting one side or the other in this regional conflict. In fact, there’s dissension among Arab nations as to whether Hezbollah is worth defending. Even Egypt is noncommittal. And the parties most directly involved- Syria and Israel- are seemingly content to let Lebanon provide the battleground. How the world could get dragged into this conflict requires a conspiracy of events that Oliver Stone would envy.

### AT Indo Pak War

#### No Indo-Pak war – history proves de-escalation

* History proves:
* Kargil war ended without escalation
* Terror attacks in ’01 and ’02 didn’t cause war
* Pakistan military doesn’t want war, neither does Modi
* Both leaders understand MAD – speeches prove
* Current moves are theatrics and unlikely to escalate

Ganguly 3/5/19 [Sumit Ganguly is Distinguished Professor of Political Science and Rabindranath Tagore Chair in Indian Cultures and Civilizations at Indiana University, Bloomington. Why the India-Pakistan Crisis Isn’t Likely to Turn Nuclear. March 5, 2019. https://www.foreignaffairs.com/articles/india/2019-03-05/why-india-pakistan-crisis-isnt-likely-turn-nuclear]

Worried analysts now fear that, since India and Pakistan have breached the informal norm against using air power across the border, they will be unable to prevent further escalation. Hawkish publics in both countries are calling for retaliation. Can the politicians exercise restraint? THE LESSONS OF HISTORY No one can say for sure, but history suggests that there is cause for optimism. During the Kargil War, India worked to contain the fighting to the regions around Pakistan’s original incursions and the war concluded with no real threat of nuclear escalation. Less than two years later, the two countries plunged into crisis once again. In December 2001, five terrorists from the Pakistan-based groups Lashkar-e-Tabia and Jaish-e-Mohammed attacked the parliament building in New Delhi with AK-47s, grenades, and homemade bombs, killing eight security guards and a gardener. In response, India launched a mass military mobilization designed to induce Pakistan to crack down on terrorist groups. As Indian troops deployed to the border, terrorists from Pakistan struck again. In May 2002, three men killed 34 people in the residential area of an Indian army camp in Kaluchak, in Jammu and Kashmir. Tensions spiked. India seemed poised to unleash a military assault on Pakistan. Several embassies in New Delhi and Islamabad withdrew their nonessential personnel and issued travel advisories. The standoff lasted for several months, but dissipated when it became apparent that India lacked viable military options and that the long mobilization was taking a toll on the Indian military’s men and materiel. The United States also helped ease tensions by urging both sides to start talking. India claimed victory, but it was a Pyrrhic one, as Pakistan failed to sever its ties with a range of terrorist organizations. Other nuclear states have also clashed without resorting to nuclear weapons. In 1969, China, then an incipient nuclear weapons state, and the Soviet Union, a full-fledged nuclear power, came to blows over islands in the Ussuri River, which runs along the border between the two countries. Several hundred Chinese and Soviet soldiers died in the confrontation. Making matters worse, Chinese leader Mao Zedong had a tendency to run risks and dismissed the significance of nuclear weapons, reportedly telling Indian Prime Minister Jawaharlal Nehru that even if half of mankind died in a nuclear war, the other half would survive and imperialism would have been razed to the ground. Yet despite Mao’s views, the crisis ended without going nuclear, thanks in part to the efforts of Soviet Prime Minister Alexei Kosygin, who took the first step by travelling to Beijing for talks. There’s reason to believe that the current situation is similar. Pakistan’s overweening military establishment undoubtedly harbors an extreme view of India and determines Pakistan’s policy toward its neighbor. The military, however, is not irrational. In India, although Prime Minister Narendra Modi has a jingoistic disposition, he, too, understands the risks of escalation, and he has a firm grip on the Indian military. Another source of optimism comes from what political scientists call the “nuclear revolution,” the idea that the invention of nuclear weapons fundamentally changed the nature of war. Many strategists argue that nuclear weapons’ destructive power is so great that states understand the awful consequences that would result from using them—and avoid doing so at all costs. Indian and Pakistani strategists are no different from their counterparts elsewhere. Even Pakistani Prime Minister Imran Khan, a political neophyte, underscored the dangers of nuclear weapons in his speech addressing the crisis last week. And Modi, for all his chauvinism, has scrupulously avoided referring to India’s nuclear capabilities. The decision by India and Pakistan to allow their jets to cross the border represents a major break with the past. Yet so far both countries have taken only limited action. Their principal aim, it appears, is what the political scientist Murray Edelman once referred to as “dramaturgy”—theatrical gestures designed to please domestic audiences. Now that both sides have gone through the motions, neither is likely to escalate any further. Peering into the nuclear abyss concentrates the mind remarkably.

#### No risk of Indo-Pak war

Sehgal and Rajaraman ’18 Rashme Sehgal and Ramamurti Rajaraman 18, he’s being interviewed, Emeritus Professor of Theoretical Physics at Jawaharlal Nehru University, "'India-Pakistan nuke war not a realistic possibilty', says leading nuclear expert Ramamurti Rajaraman", Firstpost, https://www.firstpost.com/india/india-pakistan-nuke-war-not-a-realistic-possibilty-says-leading-nuclear-expert-ramamurti-rajaraman-3880145.html

Q: The conflict between India and Pakistan has intensified in the last three years. If the situation worsens, is there a likelihood that India could launch a pre-emptive first strike against Pakistan if it feared an imminent nuclear strike? Of course, this could mean a marked reversal of our no-first use (NFU) policy. On the other hand, if India goes in for more surgical strikes, can Pakistan use a conventional attack as a pretext to attack India? A: The conflict between India and Pakistan during the past three years has been limited to Jammu and Kashmir. These conflicts may continue and may also occasionally intensify. There may also be a lot of heated rhetoric from both sides. But I don’t think there is any realistic possibility of those conflicts developing into a full-scale war, let alone one with any serious chances of a nuclear strike by Pakistan. Notice that there has been no mainland attack by Pakistan based terrorists since the 2008 Mumbai attacks. I feel that this is because Pakistan military and its Inter-Services Intelligence do appreciate the fact that the next time there is an attack of that magnitude, India would have to retaliate in a serious manner. It is true that the Pakistan Army maintains a hostile posture towards India as a matter of policy. But that is done largely for domestic consumption and for maintaining its pre-eminence in the Pakistani power structure. If push comes to shove, the leadership in both countries are too responsible to let matters go anywhere near a nuclear threshold. So, there is no question of India conducting a pre-emptive strike on Pakistan in anticipation of a nuclear attack from them. I don’t think India will reverse its NFU policy, even though some analysts, for the want of anything better to write about, keep harping on it. That would be a very unwise thing to do diplomatically.

#### Bunch of mitigating factors solve

Haider ‘16Sajjad Haider, Editor at the Kashmir Observer, “Why War Between India And Pakistan Will Not Happen?”, 9-20, https://kashmirobserver.net/2016/ko-analysis/why-war-between-india-and-pakistan-will-not-happen-10264

War hysteria is being drummed up by the media and “news room experts”, and there are growing calls for revenge against Pakistan for allegedly being the mastermind behind the Uri attacks. All this is hysteria- pure and simple- and will come to **naught**. The reasons pertain to the very nature of war in the 21st century- that is, its mutation and improbability-, the nuclearization of the subcontinent wherein conventional military superiority is **dulled by nukes**, and the large megatrend of historical import, **globalization**. War between states or entities began as “total war” which meant all resources and even all peoples in the throes of war got involved and were also seen as targets. The First and the Second Great War constitute classic examples of this in modern history. However, since the end of the Second World War, on account of profound **structural changes** – in domains as varied as world politics, **military developments and thinking**, the development and spread of **nuclear weapons** and what has been termed as **“complex interdependence”**- the thick flows of commerce and trade that bound nations together- rendered total war **almost impossible**. For instance, the Cold war never crystallized into a “hot war” because of nukes. The paradigm that determined US- Soviet relations was Mutually Assured Destruction(MAD) which meant that if either the US or the former Soviet Union broke or crossed a certain threshold, it would be at the peril of either country. Both would get destroyed. This paradigm holds between India and Pakistan- albeit in a truncated manner. So given structural issues and conditions, total **war is ruled out between India and Pakistan**. What about “limited war”? Can India respond by limited, surgical strikes on Pakistani installations or targets? The answer again is a NO. A surgical strike would entail abrogating Pakistan’s sovereignty and an act of war.Pakistan, if this scenario pans out, with its nuclear doctrine, can escalate the conflict and resort to its nukes and it may follow up by posturing or “hot pursuits” in vulnerable points of Indian defence. All this would mean escalation of the war beyond tolerable thresholds for both India and Pakistan. Moreover, the respective nationalisms of India and Pakistan will become more belligerent in an idiom of what we would call “techno nationalism”. These themes or issues then act as major impediments to war between India and Pakistan. This, however, is not all. There has been both an evolution and revolution in military thinking and doctrine. While most nations maintain and reserve the military instrument- that is conventional military and army build ups and deployments- the domain of war is now in what is called “asymmetric war”- that is, roughly speaking, a quasi war which does not entail the use of all the state’s military options and instruments. In more advanced countries, there is also the new doctrine called the “Revolution in Military Affairs (RMA) - which entails the use of high technology warfare. But this option, given the nature and structure of India and Pakistani armed forces is not available to either country. Even if, hypothetically speaking, it was, nuclear weapons would give RMA short shrift. Overlaying these military and security dynamics which precludes the military option for India and Pakistan is globalization- a large historical megatrend that involves economic openness over autarky and ensconcing a nation into the sinews of the global economy. While Pakistan is not a “globalizer” (the country does not really figure in the globalization index and its economic and financial linkages with the world are weak), India, post 1991, has been a beneficiary of the open world economic order. This, among other things, has allowed the country to reap political dividends too. While the global economy is yet to recover entirely, India, if certain things remain constant and hold, is expected to clock a growth rate of over 6%. This growth rate is absolutely essential for India to maintain its economic trajectory and grow in other dimensions- including defense spending and expenditure and even military modernization. And, importantly, India being a component of “complex interdependence” with deep linkages- trade, and commercial- with the wider world will throw spanner into this paradigm. War will redound negatively within and without. Capital flows which are a complement or supplement to the national savings rate which in turn determines investment which leads to growth will dry up; interest rates will shoot up and so will inflation leading to an economic crisis. There will also be consequences on the global economy and the world will pay a price for war between India and Pakistan. All these factors essentially militate against war between the countries. What then is being trotted out by the media? Nothing more than a feel good factor from drumming up hysteria. The contemporary world is too complex to be singularly drummed into a straitjacket of vanity , emotionalism and revanchism. So those who fear the outbreak of **war between India and Pakistan** must rest assured that this **will not happen**. Structural and economic reasons will militate against this- a disappointment, in the final analysis for war mongers and “TV experts” but a victory for peaceniks and sober minds.

#### India wants to be perceived as a responsible nuclear power---they look to the US for signals on acceptable nuclear doctrine

Nicola Leveringhaus 18, PhD, Professor in Department of War Studies, School of Security Studies, King's College London, March 2018, “Between conformity and innovation: China’s and India’s quest for status as responsible nuclear powers,” https://www.cambridge.org/core/journals/review-of-international-studies/article/between-conformity-and-innovation-chinas-and-indias-quest-for-status-as-responsible-nuclear-powers/914CFDA6E8557196DF88CDE26D3A4682

A rising power’s efforts at conformity centre upon seeking recognition on the basis of a given standard of an elite club.13 As rising powers seek to live up to this standard, they emulate ‘the values and practices of the higher-status group.’14 In doing so, they reinforce the normative structures that underpin the standard. To the extent that China and India seek recognition of their responsible nuclear status through conformity, we see their efforts as aimed primarily at key stakeholder nuclear powers within the global nuclear order: historically the United States, Russia, France and the United Kingdom, where the role of the United States is paramount. The standard that China and India seek to meet is nuclear responsibility, a multidimensional concept whose norms and practices we expand upon below. Broadly speaking, a responsible nuclear sovereign is ‘respectful of certain widely accepted norms of behaviour.’15 The norms that regulate such responsible nuclear behaviors underpin the very fabric of the global nuclear order, where that order both seeks to ensure strategic stability 16 and to regulate social relations between states by constituting role identities (as responsibles or irresponsibles, among others) and conditioning what political actions are deemed legitimate.17

International norms and practices of nuclear responsibility are not static, but in flux: ‘responsibility, like all social norms, change over time, and these structural changes are the product of social contestation, of actors challenging and revising prevailing norms.’18 It is within this space of contestation that opportunities for innovation may emerge. Rising power innovation in the domain of nuclear responsibility has the potential to offer alternative models of nuclear deterrence and restraint that suit the specific security needs of rising powers and that can contribute in new ways to the overall stability of the global nuclear order. Where status is concerned, innovation provides a pathway by which states can seek to ‘achieve preeminence on a different ranking system’ and thereby be ranked more highly, according to innovative standards, than members of elite clubs.19

Moreover, rising powers may also choose to pursue innovation as a strategy because they ‘want to maintain distinctive identities’. 20 As we will show, China and India have both emphasised the non-coercive role of their nuclear weapons programmes, and have made claims that they practice greater restraint than Western nuclear weapons states. Doing so invokes wider discourses of solidarity with non-Western states that serve ‘as a means of persuading, symbolising and euphemising claims to particular identities and social relations.’21 Thus, beyond efforts to appeal to dominant states in the global nuclear order, China and India target their nuclear behaviour and discourse at a larger constituency of nonWestern, developing states, with whom they have historically shared a post-colonial and/or anti-hegemonic normative agenda.

Seeking responsible nuclear status though conformity

In this section, we evaluate Chinese and Indian efforts to attain recognition as responsible nuclear powers through conformity with dominant norms and practices of responsible nuclear behaviour. In order to do so, we need to be clear about what nuclear responsibility means. Unsurprisingly, given that nuclear restraint has been at the heart of ‘the problem and project of nuclear order,’ dominant norms and practices of nuclear responsibility centre on varying conceptions of nuclear restraint.

The NPT, opened for signature in 1968 and in force from 1970, remains the key legal institution within the global nuclear order that lays out the expected responsibilities of its signatories. Following its indefinite extension in 1995, the Treaty enjoys widespread adherence.22 The NPT demands different types of responsible behaviours of nuclear and nonnuclear weapon states. For nuclear weapon states, responsible behaviour entails restraint through undefined progress towards arms control and disarmament as well as restraint in the export of sensitive nuclear technologies to non-nuclear states. For non-nuclear weapon states, responsibility rests on restraint in not developing a nuclear weapons capacity, although these states possess the ‘inalienable right’ to utilise nuclear energy for civilian purposes. In essence, dominant understandings of responsible behaviours based on NPT membership relate to legal obligations not to spread nuclear technology and test nuclear weapons, as well as norms of non-proliferation and non-use. These four NPT based benchmarks of nuclear responsibility offer the strongest and clearest measures for conformist responsible nuclear behaviour. Beyond the NPT, inter-subjective ideas of nuclear responsibility may include the extent to which actors are invested in a ‘duty of care’ of their nuclear arsenal and/or civilian facilities.23 Specifically, a duty of care relates to the robustness of national safety and security measures, such as liability provisions in the event of a nuclear accident as well as the global nuclear security agenda, promoted by former US President Obama from 2010 to 2015. 24

Declaratory nuclear doctrines and operational nuclear postures also play into assessments of how far a nuclear state can be judged as responsible. Indeed, even nuclear deterrence can contain elements of restraint, as Nina Tannenwald has shown. 25 Conceptions of nuclear deterrence vary from narrow national self-defence to an extended nuclear guarantee. The extent to which nuclear deterrence reflects restraint will depend on the strategies adopted by nuclear armed states.

### AT Russia or China War

#### 1] No Russia OR China wars – even if revisionist.

Jones ‘19 Bruce Jones is vice president and director of the Foreign Policy program at Brookings Institution, Washington, DC, USA, a senior fellow in the Institution’s Project on International Order and Strategy, and a consulting professor at the Freeman Spogli Institute at Stanford University. 2019. “A Not Quite Multipolar World.” Think Tanks, Foreign Policy and the Emerging Powers, edited by James G. McGann, Springer International Publishing, pp. 61–78. Crossref, doi:10.1007/978-3-319-60312-4\_3.

The Rising Powers: Reformers, Not Revolutionaries With the notion that the BRICS are a unified force capable of challenging the United States shown to be more fiction than fact, it becomes clear that the rising non-Western powers are better positioned to shape the global order, gaining greater influence from acting within the international system rather than overthrowing it.32 The larger rising powers, such as India and Brazil, as well as traditional US allies like Korea and Turkey, have repeatedly demonstrated that they do not seek to break the international order, but rather to profit from it while their own power continues to grow. For these nations, a collapse of the international order would only result in unprofitable chaos, offering little incentive for rising powers to reject the US-led system for anarchy. Certainly, in this changing environment, the emerging powers will press for a greater role at the global high table, rather than merely accept Western edicts. Yet, in pursuing their own independent agendas, the emerging powers face a dilemma. They may have an impulse to rivalry and some interest in restraining US influence, but they also hold fundamental stakes in a stable global economy, and in protecting the sea and air routes through which global trade and energy flow. This is particularly true of China, which needs to maintain very rapid growth both to sustain its domestic stability and to project international influence—but this requires energy imports, the flow of which largely depends on the security maintained by American military might.33 In the end, these states will not forget that their very rise came about through integration into the established global economic system, not by rebelling against it. Select actors, like China and Russia, will continue efforts to curtail US leadership in certain domains. However, even these revisionist powers are likely to elect to cooperate with Washington and its allies in some fields, namely counter-terror and nuclear non-proliferation, the latter illustrated by the investment by Russia and China in the recently successful nuclear negotiations with Iran by the P5+1 (the five permanent members of the United Nations [UN] Security Council, China, France, Russia, the United Kingdom, and the United States, plus Germany). Their own need for continued economic growth constrains these would-be revolutionaries. On its own, neither Moscow nor Beijing is strong enough to completely topple the US-led system—they can only challenge American leadership if others follow, and so far they have found few takers. The rising middle-income nations should provide these missing followers; yet they are absent. The fundamental reality is that, for most of these states, their stories mirror that of the majority of the BRICS: the allure of remaining in the US-led system is greater than the potential benefits of working against it. As with India and Brazil, the second-tier powers have grievances with the current international order. However, these aspects point them towards reform, not revolt. Emerging potential middle powers from Nigeria to Indonesia have experienced tremendous economic growth under the Western-organized order, growth that their leaders know cannot be guaranteed if the global economic system were to collapse.34 Similarly, they appreciate the greater danger inherent in a more anarchic world. While the Western order cannot fully prevent conflict, the US-backed post-1945 norm against interstate aggression has contributed to a decline in interstate warfare since the mid-twentieth century.35 The second-tier nations have benefited significantly from this fact. For governments seeking to maintain economic growth, not having to dedicate vast resources to territorial defense is a large boon. What is more, many of these emerging middle-income countries are in Asia, and there they cast a wary eye on a growing and increasingly assertive China, clearly preferring the continuation of the existing order to what would amount to an international free-for-all. Moreover, the middle-income states paradoxically benefit most from a halfhearted BRICS challenge to the global order. In pressing the West for revisions to the international order, the BRICS shoulder the burden of opening the door for a conversation on reforming the international system. However, this push lacks the momentum to successfully create a new order. Instead, it leaves an opening for the second-tier states to put forward their own demands. Furthermore, as the BRICS economies stumble and the group’s cohesion frays, this opening only expands, enabling these middle powers to punch above their weight. Thus, these second-tier nations are likely to engage in a strategy akin to the geopolitical balance of power theory, except in economic terms. Alternating support for Western-backed institutions, such as the World Bank and IMF, will be matched with endorsements of BRICS alternatives as the middle powers effectively hedge against either group gaining concrete dominance over the international economic order. Within this framework of support for the general tenets of the international order, the emerging powers possess a strong impulse towards rivalry with the United States. At a minimum these countries have a strong impulse towards autonomy, grounded in what I call the “psychology of rise,” in which rising powers seek to undo the humiliation done unto them in their first encounters with a globalizing West and in their resulting positions within the post-war order. The psychology of rise is most evident in China’s assertive stance in defense of its interests and influence in East Asia, but it is equally present in India’s defense of its interests in the evolving climate change regime, and in Brazil’s aspiration for a bigger role in global security affairs. And, despite some economic constraints and challenges, the emerging powers have the tools to advance their aims, and even, at times, to reshape portions of the international order. China is on track to augment its regional sway through the economic diplomacy of the nascent Asian Infrastructure Investment Bank (AIIB), which has successfully drawn in US allies and partners from across the globe. Though Delhi appears to be flirting with increased use of its hard power, India enjoys a wide range of soft-power assets to draw upon.36 It boasts, as Peter Martin notes, “Bollywood, Yoga, Buddhism, and a rich philosophical tradition. It has a world-class cadre of global public intellectuals from Amartya Sen to Salman Rushdie. It also has an extensive, wealthy, and increasingly politically engaged diaspora spread across the political and economic capitals of the world.”37 While the permanent members of the UN Security Council rejected the 2010 Turkish-Brazilian diplomatic foray to broker a nuclear deal with Iran, the initiative itself, as well as global reaction, reflected Brasilia’s increasing weight in the international arena. Thus, while the rising powers will strive for autonomy, this struggle is unlikely to entirely overcome the incentives for restraint towards, and even cooperation with, the current international order and the United States. This balance between the impulse to rivalry and the incentives for restraint is the most important dynamic in contemporary international affairs; and for the moment, the balance tips towards restraint.

### ---Russia War

#### 1] No war – tensions can be diffused.

Hanlon and Zeigler ’19 (Michael E. O'Hanlon and Sean Zeigler; Michael E. O’Hanlon, Senior Fellow - Foreign Policy, Director of Research - Foreign Policy, The Sydney Stein, Jr. Chair; Sean Zeigler, Fellow, Washington Semester Program - Carnegie Mellon University, ; 7-13-2019; "No, we aren’t on the brink of a new Cold War with Russia and China"; https://www.brookings.edu/blog/order-from-chaos/2019/07/13/no-we-arent-on-the-brink-of-a-new-cold-war-with-russia-and-china/, Brookings, accessed 12-6-2019; JPark)

Increasingly in U.S. national security circles, it has become common to hear talk of a new Cold War with great-power rivals. But this way of thinking is **imprecise** at best, dangerous at worst. A distinguished group of American experts has just warned against such thinking in regard to China, lest it create a self-fulfilling prophecy. However unbecoming Vladimir Putin’s rule may be in Moscow, we need a similar corrective for how we think about **Russia**. The Trump administration’s 2018 National Defense Strategy, like the second-term Obama administration’s “Third Offset” concept, usefully reemphasizes deterrence of great-power conflict. There can be no doubt that Russia and China have both behaved in a much more assertive and threatening manner in recent years. But the United States has a tendency to overdo such policies. In the case of Russia, while NATO’s modernization efforts, and its modest military reinforcements in places like the Baltic states and Poland are welcome, we must avoid a **pervading mentality** that anticipates a struggle with the Kremlin at every turn. COLD WAR RHETORIC ABOUT RUSSIA IS MISCONCEIVED The dangers and fallacies of thinking in Cold-War, **zero-sum**, and **military-first policies** towards Russia are several-fold. First, today’s Russia, while both vindictive and ambitious, has nothing like the global ambitions of the Soviet Union. While it expresses a sense of betrayal by the West, it evinces no grandiose concept for worldwide conquest. As authors such as Timothy Snyder and Robert Kagan rightly argue, there can be a sort of authoritarian contagion that leaders like Putin could spread. But this is hardly akin to the Kremlin’s Marxist-Leninist ambitions for conquest during the Cold War. Second, a Cold-War-like attitude ignores how much we are still working with Russia on key global security concerns. Russia’s role is especially important given its veto powers at the United Nations Security Council, crucial for policies such as imposing sanctions on threatening nations. If there is someday to be a new deal with Iran to supersede the 2015 Joint Comprehensive Plan of Action, or if there is to be a negotiated denuclearization plan of some sort with North Korea, Russia’s support will be crucial. Despite troubled relations in recent years, Moscow generally has **supported** **American policy** at the United Nations in regard to these countries. Even in places where Russian policy is distasteful, or even reprehensible, such as in Syria, it will be far easier to solve problems if we can **de-conflict** our approaches with Moscow — and in fact, certain types of military deconfliction have been taking place for some time there, making possible the defeat of the ISIS caliphate. Third, for all the debate about NATO’s lack of adequate seriousness when it comes to defense burden-sharing, the alliance remains impressive. Although only 7 countries meet the official goal of spending at least 2 percent of GDP on their armed forces, NATO collectively accounts for more than **half of all world military** spending. Most members have significantly increased their defense budgets since the Crimea crisis of 2014. NATO has also deployed enhanced forward presence battalions to the Baltic states and Poland. They do not constitute a robust defensive perimeter, but they at least represent a **stronger tripwire** than before. NATO would do well to make its reinforcement capabilities for this region more robust, but it is hard to see Mr. Putin really believing he could **get away** with an all**-out invasion**, even today. So far, he has cautiously avoided any military excursions into NATO countries. Fourth, European nations do not get enough credit for the sustaining their sanctions on Russia as a result of its aggressions against Ukraine. Over the last half decade, largely as a result, the Russian economy has essentially gone flat. Gross domestic product and foreign direct investment in Russia have both declined since its Crimean invasion. Not only has this outcome delivered a useful punitive blow against Putin and many of his cronies, it has quite possibly helped **dissuade** any **further Russian aggression**, be it against **Ukraine** or **Georgia** or even a **Baltic** state, adding another dimension of deterrence to what NATO is doing militarily. A greater integration of economic and military measures of deterrence should be pursued in the United States and NATO, as one of us has recently argued in a new book, The Senkaku Paradox. More credible policies are needed in particular for limited and grey-area conflict zones. Such scenarios do indeed remain worrisome, as Russia continues to engage in disinformation campaigning and election meddling — but these efforts should not be confused with the existential risks of the Cold War.

#### 2] no war – false rhetoric, defensive Russia, deterrence, alliances, and culture

Tsygankov, PhD, 16(Andrei, PoliSci @ USC, 2-19, “5 reasons why the threat of a global war involving Russia is overstated,” Russia Direct, https://russia-direct.org/opinion/5-reasons-why-threat-great-power-war-involving-russia-overstated)

Why today's world is less dangerous than the Cold War Today’s world, while threatening and uncertain, is hardly more dangerous than the Cold War, for the following reasons. First, whatever the rhetoric, major powers are not inclined towards risky behavior when their core interests are at stake. This concerns not only the nuclear superpowers, but also countries such as Turkey. The prospect of confronting Russia's overwhelmingly superior military should give pause even to someone as hot-tempered as Turkish President Tayyip Erdogan. Even if Erdogan wanted to pit Russia against NATO, it wouldn’t work. So far, NATO has been careful to not be drawn into highly provocative actions, whether it is by responding to Russia seizing the Pristina International Airport in June 1999, getting involved on Georgia’s side during the military conflict in August 2008 or by providing lethal military assistance and support for Ukraine. Unless Russia is the clear and proven aggressor, NATO is unlikely to support Turkey and begin World War III. Second, Russia remains a defensive power aware of its responsibility for maintaining international stability. Moscow wants to work with major powers, not against them. Its insistence on Western recognition of Russia’s interests must not be construed as a drive to destroy the foundations of the international order, such as sovereignty, multilateralism, and arms control. Third, the United States has important interests to prevent regional conflicts from escalating or becoming trans-regional. Although its relative military capabilities are not where they were ten years ago, the U.S. military and diplomatic resources are sufficient to restrain key regional players in any part of the world. Given the power rivalry across several regions, proxy wars are possible and indeed are happening, but they are unlikely to escalate. Fourth, unlike the Cold War era, the contemporary world has no rigid alliance structure. The so-called Russia-China-Iran axis is hardly more than a figment of the imagination by American neoconservatives and some Russia conspiracy-minded thinkers. The world remains a space in which international coalitions overlap and are mostly formed on an ad hoc basis. Fifth, with the exception of the Islamic State of Iraq and the Greater Syria (ISIS), there is no fundamental conflict of values and ideologies. Despite the efforts to present as incompatible the so-called “traditional” and “Western” values by Russia or “democracy” to “autocracy” by the United States and Europe, the world majority does not think that this cultural divide is worth fighting for. Despite the dangers of the world we live in, it contains a number of important, even underappreciated, checks on great powers’ militarism. The threat talk coming from politicians is often deceiving. Such talk may be a way to pressure the opponent into various political and military concessions rather than to signal real intentions. When such pressures do not bring expected results, the rhetoric of war and isolation subsides. Then a dialogue begins. Perhaps, the increasing frequency of exchanges between Obama and Putin since December 2015 - including their recent phone conversation following the Munich conference - suggest a growing recognition that the record of pressuring Russia has been mixed at best.

### ---China War

#### 1] limited rivalry – the US and China are competitors, but not anywhere close to the Cold War rivalry between the US and Russia – there’s still a bunch of areas for potential cooperation, which de-escalates tensions

#### 2] historical examples – leaders from both countries have always worked to reduce hostility in times of crisis, which means there’s no chance of accidents spiraling – 2001 and 2009 prove

#### 3] interdependence – both have too much to lose, and don’t want to nuke their economies for no reason

#### 4] Geography

Keck 13 (Zachary, Associate Editor of The Diplomat. He has previously served as a Deputy Editor for E-IR and as an Editorial Assistant for The Diplomat, "Why China and the US (Probably) Won’t Go to War", July 12, thediplomat.com/flashpoints-blog/2013/07/12/why-china-and-the-us-probably-wont-go-to-war/)

Geography is the less appreciated factor that will mitigate the chances of a U.S.-China war, but it could be nearly as important as nuclear weapons. Indeed, geography has a history of allowing countries to avoid the Thucydides Trap, and works against a U.S.-China war in a couple of ways. First, both the United States and China are immensely large countries—according to the Central Intelligence Agency, the U.S. and China are the third and fourth largest countries in the world by area, at 9,826,675 and 9,596,961 square km respectively. They also have difficult topographical features and complex populations. As such, they are virtually unconquerable by another power. This is an important point and differentiates the current strategic environment from historical cases where power transitions led to war. For example, in Europe where many of the historical cases derive from, each state genuinely had to worry that the other side could increase their power capabilities to such a degree that they could credibly threaten the other side’s national survival. Neither China nor the U.S. has to realistically entertain such fears, and this will lessen their insecurity and therefore the security dilemma they operate within. Besides being immensely large countries, China and the U.S. are also separated by the Pacific Ocean, which will also weaken their sense of insecurity and threat perception towards one another. In many of the violent power transitions of the past, starting with Sparta and Athens but also including the European ones, the rival states were located in close proximity to one another. By contrast, when great power conflict has been avoided, the states have often had considerable distance between them, as was the case for the U.S. and British power transition and the peaceful end to the Cold War. The reason is simple and similar to the one above: the difficulty of projecting power across large distances—particularly bodies of waters— reduces each side’s concern that the other will threaten its national survival and most important strategic interests. True, the U.S. operates extensively in China’s backyard, and maintains numerous alliances and partnerships with Beijing’s neighbors. This undeniably heightens the risk of conflict. At the same time, the British were active throughout the Western Hemisphere, most notably in Canada, and the Americans maintained a robust alliance system in Western Europe throughout the Cold War. Even with the U.S. presence in Asia, then, the fact that the Chinese and American homelands are separated by the largest body of water in the world is enormously important in reducing their conflict potential, if history is any guide at least. Thus, while every effort should be made to avoid a U.S.-China war, it is nearly unthinkable one will occur.

#### 5] Self-interest

**Bandow 12** (May 7, Doug Bandow is a senior fellow at the Cato Institute and former special assistant to President Ronald Reagan, http://www.cato.org/publications/commentary/us-china-seeking-cooperation-finding-confrontation)

\*Note: Zhongnanhai is the compound that houses the Communist Party

Still, while the PRC’s trajectory is uncertain, China almost certainly will become a stronger competitor to the U.S. Even so, **Beijing does not want conflict**. Commerce has brought riches, which have helped satisfy an emerging middle class. Derail the economic gravy train and the unelected Communist Party will **lose** its **legitimacy**. Challenge America militarily and risk losing a devastating war. The residents of Zhongnanhai are ambitious, **not suicidal**. Anyway, the U.S. would do better to improve its game than complain. Washington’s dominance over the last two or three decades has been unnatural and will inevitably decline. Accommodating rather than resisting change will better preserve American power and influence. Particularly important will be strengthening economic competitiveness and diplomatic skills. Instead of simply issuing demands when it wants something from the PRC, such as support against Iran and North Korea, America will need to persuade Beijing that the policy is in the latter’s interest as well. As for security, the U.S. and China are bound to have disagreements over the years, but none should threaten vital American interests and thus lead to conflict. Rather than confront militarily a nuclear-armed power in its own region over interests which it views as essential, Washington should expect its allies to do much more in their own defense. Perhaps the toughest challenge will continue to be human rights. Washington long has supported democracy and liberty only in the breach. During the Cold War the U.S. backed a gaggle of thugs since they were anti-Communists. Even today Washington cheers democracy activists in the Middle East—except in Bahrain, Jordan, and Saudi Arabia. Human rights in Central Asia are a painful afterthought when it comes to U.S. military bases. Anti-democratic excesses among friends such as Malaysia, Pakistan, and Singapore are passed by. And grievous human rights problems in Afghanistan and Iraq are embarrassments best ignored. Still, the fact that Washington often is hypocritical doesn’t change the fact that Beijing remains a tough authoritarian system which sometimes deploys brutal repression. Human rights are universal and Americans should promote liberty when possible. Yet the Chen saga reminds us that principle must be leavened with pragmatism when dealing with other nations. U.S. power is limited. Washington has found it impossible to compel smaller and weaker, even impoverished, starving states—Burma, Iran, Iraq, North Korea, Serbia, Syria—to do its bidding. All of these ignored ever tougher sanctions, several rebuffed military threats, and a couple even resisted military attacks. America’s ability to compel China to respect human rights is even less. Wei Jingsheng, another courageous Chinese human rights activist, complained: “The Chinese leadership does not fear the United States government; it only fears the loss of its power.” But that is simple reality. **War is unthinkable**. Sanctions would leave America friendless across Asia and Europe, undermine the weak U.S. economy, and turn Beijing into an active adversary if not enemy. Which leaves diplomacy and publicity.

#### 6] No China war --- CCP stability, deterrence, and economics

**Nolt 17** --- senior fellow at World Policy Institute and an adjunct associate professor at New York University

(James H. Nolt, “The Unlikely Prospect of War with China”, 2/16/17, World Policy Blog, http://www.worldpolicy.org/blog/2017/02/16/unlikely-prospect-war-china)

**If war were to start between U.S. and China, it would certainly not be China that starts it**. There are several reasons I am confident about that. **First is that China’s collective leadership has a strong aversion to chaos and instability**. **Managing China’s many problems is tough enough**. **War would exacerbate these immensely**, as China’s long and sad history of war illustrates, especially since 1840. **Second is that China’s military forces are much weaker than those of the U.S**., **particularly for** any naval and air conflict in **the S**outh **or E**ast **C**hina **S**eas. **This is true even without considering China’s lack of** reliable **military allies**, **whereas the U.S. has numerous powerful military allies**, including (with the U.S. itself) eight of the top 10 industrial powers on Earth. **Third is that the economic consequences of any war with the U.S., even a limited war, would be much more severe for China than for the U.S.** China’s military planners might attempt opportunistically to coerce isolated weaker countries, such as Vietnam, but their posture toward the U.S. and Japan is to deter potential foreign aggression rather than to initiate war. Furthermore, the economic vulnerability of China in event of a war is not sensitive to the lopsided military balance. **Even if the U.S. halved its current navy** and all of its numerous military allies stayed neutral, **China’s overseas trade would cease from the first day of the war**, much like what happened to Germany in both world wars. Many commentators suggest that China’s new bases in the South China Sea are changing this, but in doing so they fail to see the bigger picture. Little of China’s vital trade terminates in the South China Sea. Most of it extends over vast oceans easy for U.S. naval power to interdict with a distant blockade, just as the U.K. did to Germany twice in the 20th century. **China is now vastly more trade dependent** than it was when President Carter established diplomatic relations in 1979. **Much of the machinery** for its factories **comes from Europe**, especially Germany. **Much of its oil** travels over the long sea route **from the Persian Gulf**. Much of its metal ores come from South America, Canada, Australia, and India. Most of its exports are sold in North America and Europe. Many of its best naval and air weapons come from Russia. Though some of these could reach China by rail, with most of its overseas trade stopped, China would lack the means to pay for significant arms replenishment from Russia. **The Chinese people’s living standard would fall drastically** as many industries grind to a halt from lack of vital raw materials or overseas markets. **It is extremely unlikely that China’s leaders would willingly inflict such a catastrophe on themselves**. This is even before considering the devastation likely inflicted by the fighting itself.

#### 7] Impact and revisionism fake.

Paul **Heer 19**. Served as National Intelligence Officer for East Asia in the Office of the Director of National Intelligence from 2007 to 2015, since served as Robert E. Wilhelm Research Fellow at the Massachusetts Institute of Technology’s Center for International Studies and as Adjunct Professor at George Washington University’s Elliott School of International Affairs. 1-8-2019. "Rethinking U.S. Primacy in East Asia." National Interest. https://nationalinterest.org/blog/skeptics/rethinking-us-primacy-east-asia-40972

But this policy mantra has two fundamental problems: it mischaracterizes China’s strategic intentions in the region, and it is based on a U.S. strategic objective that is probably no longer achievable. First, China is pursuing hegemony in East Asia, but not an exclusive hostile hegemony. It is not trying to extrude the United States from the region or deny American access there. The Chinese have long recognized the utility—and the benefits to China itself—of U.S. engagement with the region, and they have indicated receptivity to peaceful coexistence and overlapping spheres of influence with the United States there. Moreover, China is not trying to impose its political or economic system on its neighbors, and it does not seek to obstruct commercial freedom of navigation in the region (because no country is more dependent on freedom of the seas than China itself). In short, Beijing wants to extend its power and influence within East Asia, but not as part of a “winner-take-all” contest. China does have unsettled and vexing sovereignty claims over Taiwan, most of the islands and other features in the East and South China Seas, and their adjacent waters. Although Beijing has demonstrated a willingness to use force in defense or pursuit of these claims, it is not looking for excuses to do so. Whether these disputes can be managed or resolved in a way that is mutually acceptable to the relevant parties and consistent with U.S. interests in the region is an open, long-term question. But that possibility should not be ruled out on the basis of—or made more difficult by—false assumptions of irreconcilable interests. On the contrary, it should be pursued on the basis of a recognition that all the parties want to avoid conflict—and that the sovereignty disputes in the region ultimately are not military problems requiring military solutions. And since Washington has never been opposed in principle to reunification between China and Taiwan as long as it is peaceful, and similarly takes no position on the ultimate sovereignty of the other disputed features, their long-term disposition need not be the litmus test of either U.S. or Chinese hegemony in the region. Of course, China would prefer not to have forward-deployed U.S. military forces in the Western Pacific that could be used against it, but Beijing has long tolerated and arguably could indefinitely tolerate an American military presence in the region—unless that presence is clearly and exclusively aimed at coercing or containing China. It is also true that Beijing disagrees with American principles of military freedom of navigation in the region; and this constitutes a significant challenge in waters where China claims territorial jurisdiction in violation of the UN Commission on the Law of the Sea. But this should not be conflated with a Chinese desire or intention to exclusively “control” all the waters within the first island chain in the Western Pacific. The Chinese almost certainly recognize that exclusive control or “domination” of the neighborhood is not achievable at any reasonable cost, and that pursuing it would be counterproductive by inviting pushback and challenges that would negate the objective. So what would Chinese “hegemony” in East Asia mean or look like? Beijing probably thinks in terms of something much like American primacy in the Western Hemisphere: a model in which China is generally recognized and acknowledged as the de facto central or primary power in the region, but has little need or incentive for militarily adventurism because the mutual benefits of economic interdependence prevail and the neighbors have no reason—and inherent disincentives—to challenge China’s vital interests or security. And as a parallel to China’s economic and diplomatic engagement in Latin America, Beijing would neither exclude nor be hostile to continued U.S. engagement in East Asia. A standard counterargument to this relatively benign scenario is that Beijing would not be content with it for long because China’s strategic ambitions will expand as its capabilities grow. This is a valid hypothesis, but it usually overlooks the greater possibility that China’s external ambitions will expand not because its inherent capabilities have grown, but because Beijing sees the need to be more assertive in response to external challenges to Chinese interests or security. Indeed, much of China’s “assertiveness” within East Asia over the past decade—when Beijing probably would prefer to focus on domestic priorities—has been a reaction to such perceived challenges. Accordingly, Beijing’s willingness to settle for a narrowly-defined, peaceable version of regional preeminence will depend heavily on whether it perceives other countries—especially the United States—as trying to deny China this option and instead obstruct Chinese interests or security in the region.