# Notes

This was my version of the generic whole res util aff – it was probably the best aff on the topic in terms of truth imo. Huge shout out to Joanne Park who cut an absurd amount of frontlines for her version of the aff which I stole a bunch of.

Interesting things about this aff – the Russia scenario and the AI counterforce scenario were kinda cool and not as stock as some of the other stuff – I usually went for miscalc and AI in the 1ar because nobody had a good answer to miscalc and nobody knew what AI said

I’m omitting frontlines that I didn’t write

The answer to the modi base DA might be the best card I cut all year and I actually got to break it and win on it at Harvard which was pretty awesome

# 1AC – The Kids Aren’t Alright

## 1AC

### Plan ~:20

#### Resolved: States ought to eliminate their nuclear arsenals. To clarify – this doesn’t entail an affirmation that the state is good – saying Nazi Germany ought not invade Poland does not entail Nazi Germany is good. Further specification is in the doc.

A “state” is constituted by a permanent population, a defined territory, a government, and the capacity to enter international relations.

Duhaime “State.” Duhaime's Law Dictionary, http://www.duhaime.org/LegalDictionary/S/State.aspx. [Premier]

The 1933 Convention on the Rights and Duties of States (aka Montevideo Convention) specifically defines statehood, at ¶1 as: "The state as a person of international law should possess the following qualifications: a permanent population; a defined territory; government; and capacity to enter into relations with the other states." In Estates of Ungar v. Palestinian Authority, Justice Lagueux of the United States District Court (Rhode Island) wrote: "Only States enjoy sovereign immunity.... International law determines statehood. The 1933 Montevideo Convention on the Rights and Duties of States sets forth the legal standard for evaluating an entity's claim to statehood. Convention on the Rights and Duties of States (entered into force Dec. 26, 1934, hereinafter "Montevideo Convention"). Under the Montevideo Convention, an entity is a State when it possesses: (1) a permanent population; (2 )a defined territory; (3 )a government and (4) the capacity to enter into relations with other states. The United States adopted these criteria ... Federal courts consistently apply the four criteria to determine whether or not an entity is a State and thus qualifies for the protections of sovereign immunity."

Arsenal definition

LANI ‘8 (Los Alamos National Laboratory, https://web.archive.org/web/20111001211340/http://www.lanl.gov/natlsecurity/nuclear/stockpile/)

As the nature of threats to the United States and the world has evolved, our defense policy has changed from one based on specific threats to one that can respond quickly to many kinds of potential threats, including asymmetric threats. One part of our nation's capabilities-based defense is our enduring nuclear stockpile—the country's supply of readily available nuclear weapons.

The stockpile, also called the nuclear arsenal, refers to a country's supply of readily available nuclear weapons. The term nuclear weapons refers to the explosive warheads and the bombs and missiles that can deliver them to enemy targets.

#### Only full elimination solves – even one state with weapons causes a power imbalance.

Kroenig '13 (Matthew Kroenig; Matthew Kroenig is an assistant professor and international relations field chair in the Department of Government at Georgetown University. He is the author of Nuclear Superiority and the Balance of Resolve: Explaining Nuclear Crisis Outcomes, published in the January 2013 issue of International Organization; 9-3-2013; "Think Again: American Nuclear Disarmament"; https://foreignpolicy.com/2013/09/03/think-again-american-nuclear-disarmament/, Foreign Policy, accessed 12-1-2019; Note: the card may seem to be saying yes nukes but it’s in response to the idea that just the US should eliminate – it’s not miscut, and warrants still apply; JPark)

Nuclear reductions and the heady dreams of abolition are driven in part by a belief that nukes are Cold War anachronisms. But it would be incorrect — dangerous, in fact — to assume that the conditions that have allowed the United States to de-emphasize its atomic arsenal will persist. Nuclear weapons are still the most potent military tools on Earth, and they will remain central to geopolitical competition. They have been relatively unimportant in the recent past not because humanity has somehow become more enlightened, but because we have been blessed with a temporary respite from great-power rivalry. The Soviet Union’s collapse left the United States as the world’s sole superpower, and America’s unmatched conventional military overawed other countries. Nuclear weapons have not been central to America’s national security for the past two decades because its primary foes — Serbia, Iraq, Afghanistan, and al Qaeda — did not have them. Whatever America’s problems in prosecuting its recent wars, a lack of firepower was not one of them. But times are changing. Economists predict that China could overtake the United States as the world’s largest economy in the coming years, and international relations theory tells us that transitions between reigning hegemons and rising challengers often produce conflict. Already, China has become more assertive in pursuing revisionist claims in East Asia, confronting America’s allies, and building military capabilities — including anti-ship ballistic missiles and submarines — tailored for a fight with the United States. In September 2012, a dispute between China and Japan over the Senkaku Islands nearly caused a war that could have easily drawn in the United States. Beijing’s contested claims to natural resources in the South China Sea and ever-present tensions with Taiwan could also lead to Sino-U.S. conflict. Even relations with Russia, America’s partner in arms control, are becoming more competitive: The civil war in Syria bears every hallmark of a Cold War-style proxy battle. In short, great-power political competition is heating up once again, and as it does, nuclear weapons will once again take center stage. The writing is already on the wall. Russia, China, India, Pakistan, and North Korea are modernizing or expanding their nuclear arsenals, and Iran is vigorously pursuing its own nuclear capability. As Yale University political scientist Paul Bracken notes, we are entering a “second nuclear age” in which “the whole complexion of global power politics is changing because of the reemergence of nuclear weapons as a vital element of statecraft and power politics.” Nostalgia for simpler times can be seductive, but the United States needs a nuclear force that can protect it from the challenges that lie ahead. MIKE FISHER/AFP/Getty Images “It Takes Only a Handful of Nukes to Deter an Enemy.” Wrong. Advocates of further cuts argue that a secure second-strike capability — the ability to absorb an attack and retain enough nuclear warheads to launch a devastating response — is sufficient for nuclear deterrence. Although “secure” and “devastating” are imprecise terms, many analysts would say that a few dozen submarine-launched ballistic missiles, each with multiple warheads, is plenty because at-sea subs are difficult to target in a first strike and the firepower provided by, say, 200 nuclear weapons is impressive. By their logic, anything more is “overkill” that can be cut with little loss to U.S. security. Although it is possible that no sane leader would intentionally start a nuclear war with a state that possesses even a small deterrent force, nuclear-armed states still have conflicting interests that can lead to crises. And it turns out that, contrary to widely held assumptions, the nuclear balance of power is critically important to how such disputes are resolved. Recently, I methodically reviewed the relationship between the size of a country’s nuclear arsenal and its security. In a statistical analysis of all nuclear-armed countries from 1945 to 2001, I found that the state with more warheads was only one-third as likely to be challenged militarily by other countries and more than 10 times more likely to prevail in a crisis — that is, to achieve its basic political goals — when it was challenged. Moreover, I found that the size of this advantage increased along with the margin of superiority. States with vastly more nukes (95 percent of the two countries’ total warheads) were more than 17 times more likely to win. These findings held even after accounting for disparities in conventional military power, political stakes, geographical proximity, type of political system, population, territorial size, history of past disputes, and other factors that could have influenced the outcomes. When the United States operated from a position of nuclear strength during the Cold War, it stopped the Soviet Union from building a nuclear submarine base in Cuba in 1970 and deterred Moscow from increasing support to its Arab allies in the 1967 and 1973 Arab-Israeli wars. By contrast, when the nuclear balance was less favorable to Washington, it was unable to achieve clear victories in crises against the Soviet Union — for example, failing to roll back Moscow’s 1979 invasion of Afghanistan. In addition, qualitative evidence from the past 70 years shows that leaders pay close attention to the nuclear balance of power, that they believe superiority enhances their position, and that a nuclear advantage often translates into a geopolitical advantage. During the Cuban missile crisis, American nuclear superiority helped compel Moscow to withdraw its missiles from the island. As Gen. Maxwell Taylor, then chairman of the Joint Chiefs of Staff, wrote in a memo to Defense Secretary Robert McNamara, “We have the strategic advantage in our general war capabilities.… This is no time to run scared.” Similarly, Secretary of State Dean Rusk argued, “One thing Mr. Khrushchev may have in mind is that he knows that we have a substantial nuclear superiority, but he also knows that we don’t really live under fear of his nuclear weapons to the extent that he has to live under fear of ours.” We see similar patterns in South Asia. When asked years later why Pakistan ultimately withdrew its forces from Indian Kashmir during the 1999 Kargil crisis, former Indian Defense Minister George Fernandes cited his country’s nuclear superiority. In the event of a nuclear exchange, he said, “We may have lost a part of our population … [but] Pakistan may have been completely wiped out.” This may sound crazy. To most people, “But you should see the other guy” would be scant consolation for losing perhaps millions of one’s fellow citizens. But the truth is that nuclear war might well be more devastating for one country than for the other, even if both sides can inflict “unacceptable” damage. As Cold War nuclear strategist Herman Kahn wrote, “Few people differentiate between having 10 million dead, 50 million dead, or 100 million dead. It all seems too horrible. However, it does not take much imagination to see that there is a difference.” This is not to argue that leaders of countries with bigger arsenals believe they can fight and win nuclear wars. The logic is more subtle. Nuclear states coerce each other through brinkmanship. They heighten crises, raising the risk of nuclear war until one side backs down and the other gets its way. At each stage of the crisis, leaders make gut-wrenching calculations about whether to escalate, thereby risking a catastrophic nuclear war, or to submit, throwing an important geopolitical victory to their opponent. If the costs of nuclear war are higher for one state than another, then giving in will always look more attractive to leaders in the inferior position — whatever payoff they might get from escalating would always be offset by a higher potential cost. So, on average, we should expect that leaders with fewer nukes at their disposal will be more likely to cave during a crisis. And this is exactly what the data show.

## Advantages

### Adv – Short ~1:40

#### The advantage is nuclear war – it happens now.

#### First is accidents – historical near-misses and security failures prove accidents are inevitable – it’s only a matter of time. Deterrence fails – it doesn’t account for irrational leaders or new technology.

Patrick and Evanoff 19 [Stewart M. Patrick and Kyle L. Evanoff, (Stewart M. Patrick is James H. Binger senior fellow in global governance and director of the International Institutions and Global Governance (IIGG) Program at the Council on Foreign Relations (CFR). His areas of expertise include multilateral cooperation on global issues; U.S. policy toward international institutions, including the United Nations; and the challenges posed by fragile and post–conflict states. Patrick is the author of The Sovereignty Wars: Reconciling America with the World, as well as Weak Links: Fragile States, Global Threats, and International Security. He also writes the blog, The Internationalist. Kyle L. Evanoff—research associate for International Institutions and Global Governance at the Council on Foreign Relations.) "The Lingering Specter of Nuclear War" Council on Foreign Relations, 3-7-2019, https://www.cfr.org/blog/lingering-specter-nuclear-war, DOA:1-27-2020 // WWBW]

However, **the historical record provides ample grounds for concern**, given how close nuclear powers have come to using these weapons against one another, both intentionally and inadvertently. The **litany of near-misses and false alarms makes for sobering reading.** During the 1962 Cuban Missile Crisis, U.S. President John F. Kennedy assessed the likelihood of nuclear war to be more or less a coin flip. In 1995, Russia misinterpreted a Norwegian rocket launch as a possible attack. And just last year, the State of Hawaii’s Emergency Management Agency erroneously issued an incoming ballistic missile alert. Seth **Baum**, executive director **of the Global Catastrophic Risk Institute, estimates the rate of such incidents at one per year.** **Magnifying the risk** of accidental or unauthorized nuclear war **is uncertainty over** the **security** of command and control structures to manage and use these weapons. In his harrowing 2017 tell-all, The Doomsday Machine: Confessions of a Nuclear War Planner, Daniel Ellsberg (of Pentagon Papers fame) chronicles the pathologies of the early U.S. nuclear apparatus. These included **strong incentives to subordinate safety to offensive readiness, as well as “safeguards” against unauthorized use that consisted of little more than a sealed envelope.** Given these shortcomings, Ellsberg notes, Stanley Kubrick’s classic satire Dr. Strangelove bore uncanny resemblance to a documentary. The same **vulnerabilities may afflict more recent nuclear powers**, not least Pakistan and North Korea. Meanwhile, nuclear **proliferation and tech**nological innovation **are undermining** much of the game theoretic logic of **deterrence**, which has long been central to nuclear strategy. In its most basic form, **deterrence** relies on the threat of retaliation to discourage adversaries from striking. The logic works best in a simple bilateral contest between rational, unitary actors. It **begins to falter in a messier world** of multiple countries, fragmented national authorities, and irrational leaders. Technological innovation also complicates nuclear deterrence. **Cyberweapons, antisatellite weapons, hypersonic missiles, artificial intelligence, and other innovations are** challenging longstanding assumptions, blurring distinctions between conventional and nuclear war, and **exacerbating ambiguities in the international balance of power.** Deterrence, in sum, is becoming a riskier bet.

#### Second is ambiguity – the fog of war means conventional strikes get misinterpreted.

Gower 18 [John Gower, (John Gower is a retired rear admiral from the Royal Navy with thirty-six years’ service. His last six years in service were spent in the UK Ministry of Defence, responsible for policy advice and formulation on countering weapons of mass destruction, arms control, and counterproliferation and particularly UK and NATO nuclear weapons policy. He now works as an independent consultant.) "The Dangerous Illogic of Twenty-First-Century Deterrence Through Planning for Nuclear Warfighting" Carnegie Endowment for International Peace, 3-6-2018, https://carnegieendowment.org/2018/03/06/dangerous-illogic-of-twenty-first-century-deterrence-through-planning-for-nuclear-warfighting-pub-75717, DOA:1-27-2020 // WWBW]

In the twenty-first century, **the fog of crisis** (or of conflict) **will likely be made more impenetrable by misinformation and cyber** activities. **Inflammatory rhetoric and** the multiplicity of potentially **confusing messages** emanating from one of the nations involved will **exacerbate the situation.** This is a perfect setting for miscalculation. **The fear of suffering a** first decapitating or **disabling nuclear strike is pervasive** in a crisis. It is likely that elements of less than strategic nuclear capabilities will be delivered by dual-use platforms or missiles. The possession of systems and mindsets capable of limited, less-than-strategic battlefield nuclear employment multiplies this fear through mirroring of one’s own options. **The chance that a conventional attack by a dual-capable system is perceived to be a nuclear first strike increases significantly during a conflict between nuclear-capable states.** Indeed, retaining **dual-capable aircraft** or air- or ground-launched nuclear cruise missiles, while also possessing a conventional equivalent, **raises the likelihood of miscalculation** in such circumstances from quite possible **to** near **probable**. If dual-capable weapons systems become stealthier, the certainty of their detection and classification would be reduced further. **Doubt further increases the risk of miscalculation.** Thus, of all the current and potential nuclear capabilities, the introduction of stealthy nuclear cruise missiles that can be launched from dual-capable platforms offer the greatest risk of miscalculation.

#### Third is AI – policymakers are afraid of AI counterforce which creates a ‘use it or lose it’ situation.

Geist and Lohn 18 [Edward Geist, Andrew J. Lohn, (Edward Geist is an associate policy researcher at RAND. Previously a MacArthur Nuclear Security fellow at Stanford University’s Center for International Security and Cooperation (CISAC) and a Stanton Nuclear Security Fellow in RAND’s Washington office, Edward received his doctorate in Russian history from the University of North Carolina in May 2013. Andrew J. Lohn is an engineer at the RAND Corporation. He applies a wide range of mathematical and machine learning techniques to provide new insights into highly technical policy issues, such as cyberwarfare, artificial intelligence, or drone delivery. Lohn holds a doctorate in electrical engineering from the University of California, Santa Cruz.) "How Might Artificial Intelligence Affect the Risk of Nuclear War?" The Rand Corporation, 2018, https://www.rand.org/pubs/perspectives/PE296.html, DOA:1-27-2020 // WWBW]

Although 20th-century AI struggled to actualize these applications, more-recent advances in computing could release their potential. Such contemporary techniques as deep learning are dramatically advancing machine vision and other signal processing applications, which can enhance autonomy and sensor fusion. Autonomy and sensor fusion may be of paramount strategic relevance because they could greatly improve ISR, ATR, and terminal guidance capabilities. All of these might severely erode the means by which nuclear powers assure the survivability of their nuclear forces. Because increased weapon accuracy has long since undermined the survivability of silo-based ICBMs, the United States, Russia, and China put nuclear weapons on submarines and mobile ICBMs that were deemed more likely to survive a first strike. **Technologies that make it more likely that survivable forces** (such as submarine and mobile missiles) **could be targeted and destroyed make it more plausible that one country might threaten a first strike. This undermines strategic stability**, because **even if the state possessing these capabilities has no intention of actually using them, the adversary cannot be sure of that.** A major challenge of nuclear strategy is that **adversaries may interpret one nation’s secure retaliatory forces as a first-strike threat** or a doomsday machine and react accordingly. Thus, the capabilities can still be used to pressure potential adversaries and perhaps extract concessions during a crisis. Such a capability does not have to be exploited during a crisis to be politically useful. As Alfred T. Mahan observed, “force is never more operative than when it is known to exist but is not brandished” (Mahan, 1912, p. 105). **As long as adversaries fear that the capability may exist, they can be cowed into submission without explicit confrontation—the more powerful state can in effect preemptively “win” the crisis.** As a consequence, **counterforce targeting capability is an enticing prospect for many despite its potential to compromise strategic stability. AI technologies could help enable new breakthroughs in tracking and targeting** and in antisubmarine warfare or make it easier for high-precision conventional munitions to destroy hardened ICBM silos (Holmes, 2016). **Such capabilities would be especially destabilizing because decisionmakers could threaten to employ conventional weapons much more plausibly than any kind of nuclear attack. A conventional threat would place the adversary under enormous pressure during a crisis, which could** force it to capitulate—but could also **spiral into nuclear war.** Such escalation could happen because **the adversary felt the need to use its weapons before being disarmed, in retaliation for an unsuccessful disarming strike, or simply because the crisis triggered accidental use.** Potential U.S. adversaries, such as Russia, take seriously the possibility that the United States might leverage its advantage in such technologies as AI to radically improve its counterforce capabilities. For the past several years, Russian military analysts have been engaged in a vociferous debate in the military press about the extent of their country’s strategic vulnerabilities.8 Their tendency to assume that current and future U.S capabilities pose a dire threat to Russia’s security stokes these anxieties.

#### Fourth is cyber – nuclear weapons are sitting ducks in cyberattacks – causes unmanageable escalation.

Futter '18 (Andrew Futter; Andrew Futter is an associate professor in the School of History, Politics, and International Relations at the University of Leicester. He is the author of The Politics of Nuclear Weapons and Ballistic Missile Defence and US National Security Policy, the editor of The United Kingdom and the Future of Nuclear Weapons, and co-editor of Reassessing the Revolution in Military Affairs; *Hacking the Bomb: Cyber Threats and Nuclear Weapons;* 2-15-2018; accessed 12-1-2019; JPark)

What, then, might this cyber-enabled conflict, or warfare involving cyber operations, look like? And how might these pressures involve thinking about nuclear weapons? The first thing to note is that even if nuclear systems are not targeted directly or are successfully guarded against malicious hackers, it seems very likely that the use—or even the threat of use—of cyber capabilities against an opponent during a crisis will raise tensions, concerns, and perceived vulnerabilities, and that this will make nuclear crisis resolution more complicated and perhaps more dangerous." The second thing to note is that the use of cyber capabilities is likely to obfuscate and complicate the escalation ladder, and possibly lead to an inadvertent deepening of a crisis, perhaps even up to the nuclear level. It is likely to do this in different ways from those theorized in the past, and probably at a much greater speed. It could also, for example, include attacks in both civilian and military domains. Taken together, new cyber dynamics—both operations and context might even necessitate a rethinking of these established nuclear concepts altogether. Perhaps the most important thing to note about cyber operations in future crises and warfare is that they are likely to be offense-dominant. That is, in cyberspace the advantage will be held by the attackers rather than the defenders. Although this forecast is challenged by some, and is contingent on several variables—particularly the target and intention of the attack—it does have rather significant implications for the broader security dilemma, and especially for strategic stability.51 Along with creating pressures for arms racing, this also makes cyber capabilities more likely to be employed early in a crisis, particularly given the policy of active defense mentioned above.52 The result could potentially be greater insecurity for all, and possibly unintended, and in the worst-case scenario perhaps even unmanageable escalation. By way of an example, an Israeli war game conducted in 2013 demonstrated how the use and threat of cyberattacks might very quickly escalate a crisis, in this case bringing the United States and Russia to the brink of conflict in a possible Middle East war.53 Such conflicts might begin and play out in a number of different ways, but all will likely create new pressures for crisis management. First, during a crisis hackers could potentially disrupt or destroy communications channels, making it difficult to manage forces, including nuclear forces, and reducing commanders' confidence in their weapons systems and the ability of officials to communicate. Even a relatively small-scale attack could create considerable doubt about the security and reliability of communications, and particularly about the veracity of the information flowing from their computers.54 Moreover, despite often-held beliefs to the contrary, many military communications systems—including even some used for nuclear command and control—utilize commercial infrastructure or are based on networks that could be vulnerable to an attack or disruption.55 It must therefore be assumed that the linkages required for nuclear second-strike capabilities could also be unreliable, and possibly vulnerable to an opponents cyber operations.56 Aggressors might also employ distributed denial-of-service attacks to prevent communication, of-service attacks to prevent communication, hamper battle management systems, magnify confusion, and make it more difficult to identify what is happening and perhaps to conduct a coordinated response. Such attacks might be particularly acute for nuclear dyads that are in close geographical proximity—and therefore face limited decision-making time—such as India and Pakistan." Second, the use of cyberattack capabilities might inadvertently escalate a crisis—very much building on the model of "inadvertent nuclear escalation" developed by Barry Posen back in the early 1990s.58 This might be due either to deliberate interference from a third-party actor—such as a terrorist group—or from an unauthorized insider, or by another state seeking to deepen the crisis through false flag operations (that is, operations conducted to look like they were carried out by someone else). Alternatively, it might involve accidentally targeting the wrong systems. This risk is amplified considerably in the cyber context because it is increasingly difficult to know which computer systems support which weapons and operations. For example, as Lawrence Cavaiola and his colleagues explain, "an attack [by the United States] on a Chinese system that is used to increase the readiness of tactical forces might also inadvertently degrade the readiness of Chinese strategic nuclear forces, with grave risks of misinterpretation and escalation, up to and including launch on warning."59 Thus, a cyberattack on computer systems thought to control conventional weapons might be mistaken (and interpreted) as a direct attack on an adversary's ability to use its nuclear forces. Moreover, even if enemy cyberattacks are detected and mitigated, this could still lead to a "spiral of mistrust" and worst-case scenario thinking.' Third, cyberattacks might reduce the ability to signal, causing flawed images of intentions and capabilities, or be used to "spoof early warning systems"—again, a particular concern given the possibility of false flag cyber interference by third parties. It is perfectly possible that the ability to clearly signal intentions could be one of the biggest challenges created by cyber operations for nuclear crisis management. The concern here is twofold. First, the cyber context will make communicating with an adversary (and your own forces) much more complicated. Second, it is far from clear that cyberattacks themselves offer a very useful way of signaling, and may in fact be worse than traditional methods. As Erik Gartzke and Jon Lindsay explain, this is because cyber operations "are complex, esoteric, and hard for commanders and policymakers to understand."6' Previous methods of signaling—such as seeking to indicate intentions or red lines to an adversary through limited conventional action, already a complicated and delicate endeavor—will probably be even more difficult to implement when cyberattacks are also involved.62 Moreover, given the difficulties of attribution—particularly when time is short, decision makers are under pressure, and third-party cyber activities abound—it may not be straightforward to ascertain when a conflict has actually stopped.63 In this way, cyber operations are likely to further complicate and "muddy" signaling between adversaries during a crisis or conflict, either deliberately or inadvertently." This would also, therefore, make the functioning of leadership far more complicated in any future nuclear crisis too. Fourth, the use of cyberattacks might reduce the search for viable alternatives, thereby compressing—or at least muddying —the escalation ladder, particularly the steps between conventional and nuclear use. Once hostilities begin, leaders may not feel confident that the information they are receiving is genuine; the same might also be true for commanders in the field. Each decision would be underpinned by an uneasiness about the veracity of the information and data being used, possibly leading to different types of calculations and actions.65 In addition to this, leaders would fear that cyber operations would be used early in a crisis to disable or retard their most important weapons systems and to prevent them from being used against an adversary. Unfortunately, this might create a spiral effect, and more pressure to "use them or lose them," when it comes to a state's most important military capabilities.66 In a worst-case scenario, these concerns might increase perceived time pressures to act or respond, and the option to act preemptively. Stephen Cimbala has even gone as far as to warn that a nuclear-armed state bombarded with cyberattacks—particularly on its command, control, communications, and early warning networks—might feel so vulnerable that it would opt for preemption, in the worst case with nuclear weapons.° This exacerbates the feeling that cyber operations could undermine the ability to threaten retaliation, and therefore to strike second, because cyber capabilities appear to augment conventional first-strike possibilities against key enemy systems and forces, including their nuclear weapons.68 Taken together, these dynamics raise the likelihood of unintended and potentially uncontrollable escalation and make the management of such crises more complicated and dangerous.69

#### Even a limited nuclear war causes global famine and extinction.

Mills et al. 14 [Michael J. Mills – NCAR Earth System Laboratory, Owen B. Toon – Laboratory for Atmospheric and Space Physics and Department of Atmospheric and Oceanic Sciences at the University of Colorado Boulder, Julia Lee-Taylor – NCAR Earth System Laboratory, and Alan Robock – Department of Environmental Sciences at Rutgers State University of New Jersey "Multidecadal Global Cooling And Unprecedented Ozone Loss Following A Regional Nuclear Conflict" AGU Journals, 2-7-2014, https://agupubs.onlinelibrary.wiley.com/doi/10.1002/2013EF000205, DOA:12-1-2019 // WWBW]

Pierazzo et al. [2010] reviewed literature considering the effects of large and prolonged increases in UV‐B radiation, similar to those we calculate, on living organisms, including agriculture and marine ecosystems. General effects on terrestrial plants have been found to include reduced height, shoot mass, and foliage area [Caldwell et al., 2007]. Walbot [1999] found the DNA damage to maize crops from 33% ozone depletion to accumulate proportionally to exposure time, being passed to successive generations, and destabilizing genetic lines. Research indicates that UV‐B exposure may alter the susceptibility of plants to attack by insects, alter nutrient cycling in soils (including nitrogen fixation by cyanobacteria), and shift competitive balances among species [Caldwell et al., 1998; Solheim et al., 2002; Mpoloka, 2008]. The ozone depletion we calculate could also damage aquatic ecosystems, which supply more than 30% of the animal protein consumed by humans. Häder et al. [1995] estimate that 16% ozone depletion could reduce phytoplankton, the basis of the marine food chain, by 5%, resulting in a loss of 7 million tons of fish harvest per year. They also report that elevated UV levels damage the early developmental stages of fish, shrimp, crab, amphibians, and other animals. **The combined effects of elevated UV levels alone on terrestrial agriculture and marine ecosystems could put significant pressures on global food security. The ozone loss would persist for a decade at the same time that growing seasons would be reduced by killing frosts, and regional precipitation patterns would shift. The combination of years of killing frosts, reductions in needed precipitation, and prolonged enhancement of UV radiation, in addition to impacts on fisheries because of temperature and salinity changes, could exert significant pressures on food supplies across many regions of the globe.** As the January to May 2008 global rice crisis demonstrated, **even relatively small food price pressures can be amplified by political reactions, such as the fearful restrictions on food exports** implemented by India and Vietnam, followed by Egypt, Pakistan, and Brazil, **which produced severe shortages** in the Philippines, Africa, and Latin America [Slayton, 2009]. It is conceivable that the **global pressures on food supplies from a regional nuclear conflict could, directly or via ensuing panic, significantly degrade global food security or even produce a global nuclear famine.**

### Adv – Long ~4:40

#### The advantage is nuclear war – it happens now.

#### First is accidents – historical near-misses and security failures prove accidents are inevitable – it’s only a matter of time. Deterrence fails – it doesn’t account for irrational leaders or new technology.

Patrick and Evanoff 19 [Stewart M. Patrick and Kyle L. Evanoff, (Stewart M. Patrick is James H. Binger senior fellow in global governance and director of the International Institutions and Global Governance (IIGG) Program at the Council on Foreign Relations (CFR). His areas of expertise include multilateral cooperation on global issues; U.S. policy toward international institutions, including the United Nations; and the challenges posed by fragile and post–conflict states. Patrick is the author of The Sovereignty Wars: Reconciling America with the World, as well as Weak Links: Fragile States, Global Threats, and International Security. He also writes the blog, The Internationalist. Kyle L. Evanoff—research associate for International Institutions and Global Governance at the Council on Foreign Relations.) "The Lingering Specter of Nuclear War" Council on Foreign Relations, 3-7-2019, https://www.cfr.org/blog/lingering-specter-nuclear-war, DOA:1-27-2020 // WWBW]

However, **the historical record provides ample grounds for concern**, given how close nuclear powers have come to using these weapons against one another, both intentionally and inadvertently. The **litany of near-misses and false alarms makes for sobering reading.** During the 1962 Cuban Missile Crisis, U.S. President John F. Kennedy assessed the likelihood of nuclear war to be more or less a coin flip. In 1995, Russia misinterpreted a Norwegian rocket launch as a possible attack. And just last year, the State of Hawaii’s Emergency Management Agency erroneously issued an incoming ballistic missile alert. Seth **Baum**, executive director **of the Global Catastrophic Risk Institute, estimates the rate of such incidents at one per year.** **Magnifying the risk** of accidental or unauthorized nuclear war **is uncertainty over** the **security** of command and control structures to manage and use these weapons. In his harrowing 2017 tell-all, The Doomsday Machine: Confessions of a Nuclear War Planner, Daniel Ellsberg (of Pentagon Papers fame) chronicles the pathologies of the early U.S. nuclear apparatus. These included **strong incentives to subordinate safety to offensive readiness, as well as “safeguards” against unauthorized use that consisted of little more than a sealed envelope.** Given these shortcomings, Ellsberg notes, Stanley Kubrick’s classic satire Dr. Strangelove bore uncanny resemblance to a documentary. The same **vulnerabilities may afflict more recent nuclear powers**, not least Pakistan and North Korea. Meanwhile, nuclear **proliferation and tech**nological innovation **are undermining** much of the game theoretic logic of **deterrence**, which has long been central to nuclear strategy. In its most basic form, **deterrence** relies on the threat of retaliation to discourage adversaries from striking. The logic works best in a simple bilateral contest between rational, unitary actors. It **begins to falter in a messier world** of multiple countries, fragmented national authorities, and irrational leaders. Technological innovation also complicates nuclear deterrence. **Cyberweapons, antisatellite weapons, hypersonic missiles, artificial intelligence, and other innovations are** challenging longstanding assumptions, blurring distinctions between conventional and nuclear war, and **exacerbating ambiguities in the international balance of power.** Deterrence, in sum, is becoming a riskier bet.

#### Second is ambiguity – the fog of war means conventional strikes get misinterpreted.

Gower 18 [John Gower, (John Gower is a retired rear admiral from the Royal Navy with thirty-six years’ service. His last six years in service were spent in the UK Ministry of Defence, responsible for policy advice and formulation on countering weapons of mass destruction, arms control, and counterproliferation and particularly UK and NATO nuclear weapons policy. He now works as an independent consultant.) "The Dangerous Illogic of Twenty-First-Century Deterrence Through Planning for Nuclear Warfighting" Carnegie Endowment for International Peace, 3-6-2018, https://carnegieendowment.org/2018/03/06/dangerous-illogic-of-twenty-first-century-deterrence-through-planning-for-nuclear-warfighting-pub-75717, DOA:1-27-2020 // WWBW]

In the twenty-first century, **the fog of crisis** (or of conflict) **will likely be made more impenetrable by misinformation and cyber** activities. **Inflammatory rhetoric and** the multiplicity of potentially **confusing messages** emanating from one of the nations involved will **exacerbate the situation.** This is a perfect setting for miscalculation. **The fear of suffering a** first decapitating or **disabling nuclear strike is pervasive** in a crisis. It is likely that elements of less than strategic nuclear capabilities will be delivered by dual-use platforms or missiles. The possession of systems and mindsets capable of limited, less-than-strategic battlefield nuclear employment multiplies this fear through mirroring of one’s own options. **The chance that a conventional attack by a dual-capable system is perceived to be a nuclear first strike increases significantly during a conflict between nuclear-capable states.** Indeed, retaining **dual-capable aircraft** or air- or ground-launched nuclear cruise missiles, while also possessing a conventional equivalent, **raises the likelihood of miscalculation** in such circumstances from quite possible **to** near **probable**. If dual-capable weapons systems become stealthier, the certainty of their detection and classification would be reduced further. **Doubt further increases the risk of miscalculation.** Thus, of all the current and potential nuclear capabilities, the introduction of stealthy nuclear cruise missiles that can be launched from dual-capable platforms offer the greatest risk of miscalculation.

#### Third is AI – policymakers are afraid of AI counterforce which creates a ‘use it or lose it’ situation.

Geist and Lohn 18 [Edward Geist, Andrew J. Lohn, (Edward Geist is an associate policy researcher at RAND. Previously a MacArthur Nuclear Security fellow at Stanford University’s Center for International Security and Cooperation (CISAC) and a Stanton Nuclear Security Fellow in RAND’s Washington office, Edward received his doctorate in Russian history from the University of North Carolina in May 2013. Andrew J. Lohn is an engineer at the RAND Corporation. He applies a wide range of mathematical and machine learning techniques to provide new insights into highly technical policy issues, such as cyberwarfare, artificial intelligence, or drone delivery. Lohn holds a doctorate in electrical engineering from the University of California, Santa Cruz.) "How Might Artificial Intelligence Affect the Risk of Nuclear War?" The Rand Corporation, 2018, https://www.rand.org/pubs/perspectives/PE296.html, DOA:1-27-2020 // WWBW]

Although 20th-century AI struggled to actualize these applications, more-recent advances in computing could release their potential. Such contemporary techniques as deep learning are dramatically advancing machine vision and other signal processing applications, which can enhance autonomy and sensor fusion. Autonomy and sensor fusion may be of paramount strategic relevance because they could greatly improve ISR, ATR, and terminal guidance capabilities. All of these might severely erode the means by which nuclear powers assure the survivability of their nuclear forces. Because increased weapon accuracy has long since undermined the survivability of silo-based ICBMs, the United States, Russia, and China put nuclear weapons on submarines and mobile ICBMs that were deemed more likely to survive a first strike. **Technologies that make it more likely that survivable forces** (such as submarine and mobile missiles) **could be targeted and destroyed make it more plausible that one country might threaten a first strike. This undermines strategic stability**, because **even if the state possessing these capabilities has no intention of actually using them, the adversary cannot be sure of that.** A major challenge of nuclear strategy is that **adversaries may interpret one nation’s secure retaliatory forces as a first-strike threat** or a doomsday machine and react accordingly. Thus, the capabilities can still be used to pressure potential adversaries and perhaps extract concessions during a crisis. Such a capability does not have to be exploited during a crisis to be politically useful. As Alfred T. Mahan observed, “force is never more operative than when it is known to exist but is not brandished” (Mahan, 1912, p. 105). **As long as adversaries fear that the capability may exist, they can be cowed into submission without explicit confrontation—the more powerful state can in effect preemptively “win” the crisis.** As a consequence, **counterforce targeting capability is an enticing prospect for many despite its potential to compromise strategic stability. AI technologies could help enable new breakthroughs in tracking and targeting** and in antisubmarine warfare or make it easier for high-precision conventional munitions to destroy hardened ICBM silos (Holmes, 2016). **Such capabilities would be especially destabilizing because decisionmakers could threaten to employ conventional weapons much more plausibly than any kind of nuclear attack. A conventional threat would place the adversary under enormous pressure during a crisis, which could** force it to capitulate—but could also **spiral into nuclear war.** Such escalation could happen because **the adversary felt the need to use its weapons before being disarmed, in retaliation for an unsuccessful disarming strike, or simply because the crisis triggered accidental use.** Potential U.S. adversaries, such as Russia, take seriously the possibility that the United States might leverage its advantage in such technologies as AI to radically improve its counterforce capabilities. For the past several years, Russian military analysts have been engaged in a vociferous debate in the military press about the extent of their country’s strategic vulnerabilities.8 Their tendency to assume that current and future U.S capabilities pose a dire threat to Russia’s security stokes these anxieties.

#### Fourth is cyber – nuclear weapons are sitting ducks in cyberattacks – causes unmanageable escalation.

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What, then, might this cyber-enabled conflict, or warfare involving cyber operations, look like? And how might these pressures involve thinking about nuclear weapons? The first thing to note is that even if nuclear systems are not targeted directly or are successfully guarded against malicious hackers, it seems very likely that the use—or even the threat of use—of cyber capabilities against an opponent during a crisis will raise tensions, concerns, and perceived vulnerabilities, and that this will make nuclear crisis resolution more complicated and perhaps more dangerous." The second thing to note is that the use of cyber capabilities is likely to obfuscate and complicate the escalation ladder, and possibly lead to an inadvertent deepening of a crisis, perhaps even up to the nuclear level. It is likely to do this in different ways from those theorized in the past, and probably at a much greater speed. It could also, for example, include attacks in both civilian and military domains. Taken together, new cyber dynamics—both operations and context might even necessitate a rethinking of these established nuclear concepts altogether. Perhaps the most important thing to note about cyber operations in future crises and warfare is that they are likely to be offense-dominant. That is, in cyberspace the advantage will be held by the attackers rather than the defenders. Although this forecast is challenged by some, and is contingent on several variables—particularly the target and intention of the attack—it does have rather significant implications for the broader security dilemma, and especially for strategic stability.51 Along with creating pressures for arms racing, this also makes cyber capabilities more likely to be employed early in a crisis, particularly given the policy of active defense mentioned above.52 The result could potentially be greater insecurity for all, and possibly unintended, and in the worst-case scenario perhaps even unmanageable escalation. By way of an example, an Israeli war game conducted in 2013 demonstrated how the use and threat of cyberattacks might very quickly escalate a crisis, in this case bringing the United States and Russia to the brink of conflict in a possible Middle East war.53 Such conflicts might begin and play out in a number of different ways, but all will likely create new pressures for crisis management. First, during a crisis hackers could potentially disrupt or destroy communications channels, making it difficult to manage forces, including nuclear forces, and reducing commanders' confidence in their weapons systems and the ability of officials to communicate. Even a relatively small-scale attack could create considerable doubt about the security and reliability of communications, and particularly about the veracity of the information flowing from their computers.54 Moreover, despite often-held beliefs to the contrary, many military communications systems—including even some used for nuclear command and control—utilize commercial infrastructure or are based on networks that could be vulnerable to an attack or disruption.55 It must therefore be assumed that the linkages required for nuclear second-strike capabilities could also be unreliable, and possibly vulnerable to an opponents cyber operations.56 Aggressors might also employ distributed denial-of-service attacks to prevent communication, of-service attacks to prevent communication, hamper battle management systems, magnify confusion, and make it more difficult to identify what is happening and perhaps to conduct a coordinated response. Such attacks might be particularly acute for nuclear dyads that are in close geographical proximity—and therefore face limited decision-making time—such as India and Pakistan." Second, the use of cyberattack capabilities might inadvertently escalate a crisis—very much building on the model of "inadvertent nuclear escalation" developed by Barry Posen back in the early 1990s.58 This might be due either to deliberate interference from a third-party actor—such as a terrorist group—or from an unauthorized insider, or by another state seeking to deepen the crisis through false flag operations (that is, operations conducted to look like they were carried out by someone else). Alternatively, it might involve accidentally targeting the wrong systems. This risk is amplified considerably in the cyber context because it is increasingly difficult to know which computer systems support which weapons and operations. For example, as Lawrence Cavaiola and his colleagues explain, "an attack [by the United States] on a Chinese system that is used to increase the readiness of tactical forces might also inadvertently degrade the readiness of Chinese strategic nuclear forces, with grave risks of misinterpretation and escalation, up to and including launch on warning."59 Thus, a cyberattack on computer systems thought to control conventional weapons might be mistaken (and interpreted) as a direct attack on an adversary's ability to use its nuclear forces. Moreover, even if enemy cyberattacks are detected and mitigated, this could still lead to a "spiral of mistrust" and worst-case scenario thinking.' Third, cyberattacks might reduce the ability to signal, causing flawed images of intentions and capabilities, or be used to "spoof early warning systems"—again, a particular concern given the possibility of false flag cyber interference by third parties. It is perfectly possible that the ability to clearly signal intentions could be one of the biggest challenges created by cyber operations for nuclear crisis management. The concern here is twofold. First, the cyber context will make communicating with an adversary (and your own forces) much more complicated. Second, it is far from clear that cyberattacks themselves offer a very useful way of signaling, and may in fact be worse than traditional methods. As Erik Gartzke and Jon Lindsay explain, this is because cyber operations "are complex, esoteric, and hard for commanders and policymakers to understand."6' Previous methods of signaling—such as seeking to indicate intentions or red lines to an adversary through limited conventional action, already a complicated and delicate endeavor—will probably be even more difficult to implement when cyberattacks are also involved.62 Moreover, given the difficulties of attribution—particularly when time is short, decision makers are under pressure, and third-party cyber activities abound—it may not be straightforward to ascertain when a conflict has actually stopped.63 In this way, cyber operations are likely to further complicate and "muddy" signaling between adversaries during a crisis or conflict, either deliberately or inadvertently." This would also, therefore, make the functioning of leadership far more complicated in any future nuclear crisis too. Fourth, the use of cyberattacks might reduce the search for viable alternatives, thereby compressing—or at least muddying —the escalation ladder, particularly the steps between conventional and nuclear use. Once hostilities begin, leaders may not feel confident that the information they are receiving is genuine; the same might also be true for commanders in the field. Each decision would be underpinned by an uneasiness about the veracity of the information and data being used, possibly leading to different types of calculations and actions.65 In addition to this, leaders would fear that cyber operations would be used early in a crisis to disable or retard their most important weapons systems and to prevent them from being used against an adversary. Unfortunately, this might create a spiral effect, and more pressure to "use them or lose them," when it comes to a state's most important military capabilities.66 In a worst-case scenario, these concerns might increase perceived time pressures to act or respond, and the option to act preemptively. Stephen Cimbala has even gone as far as to warn that a nuclear-armed state bombarded with cyberattacks—particularly on its command, control, communications, and early warning networks—might feel so vulnerable that it would opt for preemption, in the worst case with nuclear weapons.° This exacerbates the feeling that cyber operations could undermine the ability to threaten retaliation, and therefore to strike second, because cyber capabilities appear to augment conventional first-strike possibilities against key enemy systems and forces, including their nuclear weapons.68 Taken together, these dynamics raise the likelihood of unintended and potentially uncontrollable escalation and make the management of such crises more complicated and dangerous.69

#### Fifth is Ukraine – religious conflict escalates to US-Russia war.

Beebe 19 [George S. Beebe, (GEORGE S. BEEBE is the Vice President and Director of Studies at the Center for the National Interest, a non-partisan thinktank in Washington, D.C. He served in the US government for nearly twenty-five years, including as director of Russia analysis at CIA and as a White House adviser on Russia matters for Vice President Dick Cheney. He lives in northern Virginia.) "The Russia Trap" Thomas Dunne Books, 9-3-2019, https://us.macmillan.com/books/9781250316622, DOA:1-27-2020 // WWBW]

\*\*\*NOTE – Beebe is not making a prediction, but illustrating how escalation easily could occur – he thinks small religious conflicts could easily spark all-out war but doesn’t believe they definitely will

\*\*\*MP – Moscow Patriarchate

\*\*\*KP – Kiev Patriarchate

**The** 2014 **Russia-Ukraine crisis has precipitated one of the largest schisms in Orthodox Christian history.** Millions of worshippers are caught in the middle of a struggle for political control between Moscow and Kiev. The present conflict has its roots in 1686, when the Ecumenical Patriarch of Constantinople granted the Russian Orthodox Church (ROC) conditional jurisdiction over the Kiev Metropolis. This arrangement has remained unchanged for over three centuries, but the Soviet collapse and Ukraine’s subsequent attainment of statehood have elicited a host of difficult political questions dividing Ukrainian public opinion: How does nationality intersect with religious identity in an overwhelmingly Orthodox state? Does fealty to the Moscow Patriarchate compromise Ukrainian national sovereignty? **The majority of Ukraine’s Orthodox parishes** currently **belong** to the Ukrainian Orthodox Church **under the Moscow Patriarchate** (UOC-MP), subordinate to the ROC. **In 1992, a faction** led by the newly proclaimed “Patriarch of Kiev,” Filaret Denysenko, **broke off** from the UOC-MP **to assert its autonomy from Moscow. This spiritual project has proved popular with Ukrainian nationalists**, who have long expressed displeasure at the political messaging scattered throughout some **Russian Orthodox liturgies**; most strikingly, these **include prayers for the health and safety of the Russian armed forces. The schism came to a head with the annexation of Crimea**, when Ukrainian president Petro Poroshenko took up the cause of the Kiev Patriarchate (UOC-KP) as an assertion of Ukrainian “spiritual independence” from Russia. But over the span of its existence, the UOC-KP has not been recognized by any other Orthodox church; the Russian-aligned UOC-MP remained the sole Orthodox authority in Ukraine. In a bid to secure international legitimacy, **Ukraine lobbied the Constantinople Patriarch for a certification of autocephaly, or full self-government. It was granted this** document, a Tomos in Orthodox terminology**, in January 2019.** Shortly afterward, the UOC-KP and smaller Ukrainian Autocephalous Orthodox Church (UAOC) were merged into the new Ukrainian Orthodox Church. The UOC-**MP**, with its twelve thousand parishes across Ukraine, **is regarded by Ukrainian nationalists as a national security threat and stands on the verge of being branded as an illegitimate sect within Ukraine.** Around seventy parishes have opted to join the Ukrainian Orthodox Church, but what will become of the less willing? Several UOC-MP **priests have unequivocally stated their resolve to die in defense of their churches and monasteries.** Meanwhile, the Russian Orthodox Church is accusing Ukrainian authorities of seizing and vandalizing UOC-MP property with increasing frequency. The Ukrainian Rada has already passed an unprecedented law allowing church allegiance to be switched by majority vote, further increasing the likelihood of conflict within UOC-MP communities. From this point, it is easy to imagine how events might begin to spiral out of control. Ukraine’s president is unlikely to seek outright physical confrontation with the UOC-MP, but Ukrainian nationalists to his right have proved themselves less restrained. **Right Sector, a prominent nationalist coalition, sees the** UOC-**MP leadership structure as wartime traitors, hostile foreign agents who cynically undermine Ukrainian national sovereignty under the cover of religion.** Over the past year, Right Sector has staged several large street confrontations outside of UOC-MP churches to disrupt ongoing religious services. These ongoing efforts are likely to intensify and become more frequent, as the granting of autocephaly has cast the dispute over UOC-MP church property in a new political light. **Imagine**, then, that a large group of Ukrainian nationalists blockades yet another UOC-MP church, as they have recently done in the Volyn Oblast of northwestern Ukraine. The priest arrives shortly thereafter, accompanied by a small congregation. Against a cacophony of jeers and threats of violence, he insists on entering his church to hold regularly scheduled services. As he pushes his way through the crowd, someone throws a stone at the back of his head. He collapses at the footsteps of his church. An ambulance is called, and responders pronounce him dead on the spot from a fatal concussion. **The religious cold war in Ukraine begins to turn hot. Tens of thousands of Russian Orthodox believers march in protest against the violence in Ukraine. Hundreds of private Russian citizens cross the border armed with pistols, rifles, and other small arms, intent on preventing further Ukrainian attacks and defending what is seen as Russian Orthodox property. The US State Department attempts to defuse tensions with a statement condemning violence, affirming the importance of religious freedom, and supporting Ukraine’s right to handle its own internal affairs in accordance with democratic principles.** The Russian response does not prove nearly as restrained. Since the presidential election of 2012, Russian president Putin has had to contend with growing Communist and nationalist movements on his political right flank. They accuse Putin of not doing enough to defend Russian interests with military force and complain that he naïvely seeks compromise with the West when he should instead be taking aggressive measures to roll back NATO influence in Russia’s legitimate sphere of interest. According to one particularly popular Communist critique, Putin has failed to protect the predominantly Russian-speaking people of Donbass from what is portrayed as a Ukrainian ethnic-cleansing campaign.15 The Communists charge, with overwhelming popular support, that this killing of a priest demonstrates the need to act immediately and decisively to protect Russian compatriots in Ukraine. They use this opportunity to again demand formal Russian recognition of the Donetsk People’s Republic (DPR) and the Luhansk People’s Republic (LPR), something that they have sought since 2015. Putin has to this point resisted calls for open and direct Russian military involvement in Donbass, a move that would invite serious international repercussions. But doing nothing in the face of the Ukrainian religious violence would play into the hands of his detractors, whose hawkish calls to action reflect the country’s mood better than Putin’s caution. Actively preventing Russian mercenaries from defending their co-religionists would be seen as an act of betrayal. The Kremlin settles for a response that stops just short of recognizing the Donbass: **Russian emergency ministry units, supported by the Russian national guard, will cross into Donbass to establish a safe zone around the Luhansk area, replete with field hospitals to treat Ukrainians wounded over the course of the civil conflict. Kiev calls this move not merely an invasion but an act of war, and it appeals to Washington for immediate military aid. Poland supports this call and offers to host additional American military forces to respond to Russia’s aggression.** With Congress and influential segments of American public opinion demanding a forceful response, **the White House has neither the political capital nor the diplomatic tools to de-escalate with Moscow. American tactical missile defense systems, air assets, artillery, and heavy armor pour into western Poland** over the next several weeks. The US president announces that he has ordered US military personnel that had been rotating through Poland on temporary assignments to be increased in number and stationed along the border with Ukraine, ready for action should Russian military forces move toward the western portions of Ukraine. He explains that this show of force is not to help Kiev retake Donbass but to be ready to defend the rest of Ukraine against Russia. Moscow views the US announcement with alarm. **Despite Washington’s denials, Russian military leaders conclude that Washington and Kiev are preparing for joint military action against Donbass.** From here, both sides become constrained by an increasingly narrow field of policy options. Moscow officially recognizes Donetsk and Luhansk as independent of Ukraine in a desperate last bid to deter what it sees as an imminent invasion. To protect what it has now acknowledged as two sovereign states, Russia establishes and enforces a no-fly zone across Donbass while stationing military forces across the border from Kiev-controlled territory. **The United States, in turn, has no choice but to support a Ukrainian military buildup on the other side of the Donbass border, putting the two sides within a hair’s breadth of kinetic conflict.** A single shot across the unofficial border serves as the spark to **war**. It was not ordered in Moscow, Kiev, or Washington, however. Rather, **it comes from the many “volunteer” forces active in and around the Donbass region, including the Kuban Cossack Host, which had long threatened to “come to the defense of our homeland and mother church” in response to acts of persecution against Russian Orthodox believers, and from ultranationalist paramilitary groups within Right Sector that had long been convinced that the Ukrainian government is unable or unwilling to take the steps necessary to retake Donetsk and Luhansk**. As limited conventional skirmishing between Russian and Ukrainian forces begins, the United States does its best to avoid being drawn directly into the fighting, providing intelligence, arms, and advice to Ukrainian forces while keeping its own forces far from the line of contact, ready to defend against a Russian offensive. But **a Ukrainian-operated antiaircraft unit shoots down a Russian fighter plane on combat air patrol over the Donbass, and Russian aircraft and artillery retaliate against several sites where US advisers were assisting Ukrainians, killing four American military personnel. A direct US-Russian military conflict starts climbing the ladder of escalation.**

#### Diplomacy fails – each side sees the other as an existential threat, which causes ‘escalation to de-escalate’ and serves as an impact multiplier.

Beebe 2 [George S. Beebe, (GEORGE S. BEEBE is the Vice President and Director of Studies at the Center for the National Interest, a non-partisan thinktank in Washington, D.C. He served in the US government for nearly twenty-five years, including as director of Russia analysis at CIA and as a White House adviser on Russia matters for Vice President Dick Cheney. He lives in northern Virginia.) "The Russia Trap" Thomas Dunne Books, 9-3-2019, https://us.macmillan.com/books/9781250316622, DOA:1-27-2020 // WWBW]

If they are to some degree distortions, what is the significance of these perceptions of deadly intent in Moscow and Washington? Despite deep mistrust and suspicion, neither side truly expects an imminent nuclear or conventional military attack designed to destroy the other. The stakes are too great, and the odds of success are too long, for anyone to contemplate such a suicidal course. But these **perceptions** nonetheless **make unplanned disaster more likely.** For one thing, **when each side believes the essence of the threat derives from the very nature of the other side, which cannot change, there is little incentive to seek compromise.** Indeed, aiming for a **negotiated settlement is seen as dangerous appeasement.** Such efforts are viewed as “worse than useless; they contribute to weakening of national will and reduce a country’s readiness to win the inevitable conflict when it finally comes. By this logic, **it seems more prudent and certainly more politically advantageous to abandon any effort to avoid that conflict.**” 122 More ominously, **these perceptions are reinforcing each other in a vicious cycle of interaction.** They shape the narratives that determine how events are interpreted, and they provide the cognitive filters that determine which facts are salient and which are disregarded. This in turn drives statements and actions that reinforce the threat perceptions on each side and heighten each side’s sense of vulnerability. **Russia’s great power aspirations fuel American concerns about imperialism, which strengthens US support for building West-leaning bulwarks against Russia’s influence along the country’s periphery. This stokes fears in Russia of hostile encirclement and regime change, which encourages Russian aggression in neighboring states and internal crackdowns on media and opposition groups, further convincing Americans that the Kremlin has imperial designs and sees democracy as an ideological foe.** Russia tries to cool America’s ardor for democratization crusades by cybermeddling, which the United States interprets as an existential threat and responds with punitive economic sanctions and steppedup cyberactivity of its own, all meant to deter further Russian meddling. This, however, only further convinces Moscow that Washington is accelerating its aggressive bid to weaken and destroy Russia. Left unaddressed, **this cycle of perception is likely to deepen, increasing the likelihood that the two sides will misinterpret the signals each sends in a crisis and overreact to the actions of the other side.** When a state believes its very existence is at stake, its resolve and willingness to take risks in conflict or crisis situations run startlingly high. Failure to appreciate that resolve can have serious consequences, as Europe and the United States experienced in 2014 in underestimating Moscow’s likely response to the Maidan uprising in Ukraine, and as Russians encountered in 2016 in failing to anticipate the ways America might react to election meddling. **And when this strong resolve and high risk tolerance are overlaid against a background of increasingly unconstrained shadow warfare between two nuclear powers in the cyber, military, economic, and information domains, they assume disproportionately dangerous implications.**

#### Sixth is India-Pakistan – India is shifting its nuclear capabilities towards counterforce – that creates incentivizes for both countries to strike first.

Clary and Narang 19 [Christopher Clary and Vipin Narang, (Christopher Clary is an assistant professor of political science at the University at Albany, State University of New York. Vipin Narang is an associate professor of political science at the Massachusetts Institute of Technology and a member of MIT’s Security Studies Program.) "India’s Counterforce Temptations: Strategic Dilemmas, Doctrine, and Capabilities" International Security, Vol. 43, No. 3 (Winter 2018/19), Pp. 7–52, https://www.belfercenter.org/publication/indias-counterforce-temptations-strategic-dilemmas-doctrine-and-capabilities, DOA:12-1-2019 // WWBW]

Is India shifting to a nuclear counterforce strategy? The conventional wisdom is that India only reluctantly acquired nuclear weapons and has been a restrained nuclear weapons power that adheres to a no-ªrst-use (NFU) policy and rejects the possibility of nuclear warªghting. Although the empirical record largely bears out its reluctance to acquire nuclear weapons,1 **India’s continued nuclear restraint is less certain.** Speciªcally, **India is developing a suite of capabilities and increasingly making statements about preemption and counterforce that appear inconsistent with its professed strategy of assured retaliation or minimum deterrence.** This article identiªes, and attempts to explain, why India has devoted considerable resources since 2003 to develop and acquire capabilities that exceed what is required for a strictly retaliatory nuclear arsenal. Speciªcally, why has India sought to build a diverse and growing number of accurate and responsive nuclear delivery systems at higher states of readiness, an increasing array of surveillance platforms, and both indigenous and imported air and ballistic missile defenses? Moreover, these **capability developments have emerged alongside an increasing number of public statements** by serving and retired Indian national security ofªcials **arguing that preemptive counterforce options against Pakistan are permissible doctrinally and advantageous strategically.**2 We argue that these apparently **discrepant capability developments are most likely the result of India’s conscious pursuit of** more ºexible options beyond countervalue targeting—namely, **counterforce options against Pakistan’s longer-range nuclear systems—and are largely not the product of either technological drift or strategic confusion.** If our assessment is correct, then these developments are an early indication of India’s exploration and development of options to target Pakistan’s strategic nuclear systems in a conºict. Unlike India’s nuclear strategy toward China, which appears to remain countervalue assured retaliation, available evidence suggests that **India may be developing options toward Pakistan that would permit it to engage in hard nuclear counterforce targeting, providing India a limited ability to disarm Pakistan of strategic nuclear weapons.**3 Such a development would entail a decoupling of India’s nuclear strategies toward its two neighbors. **A shift to incorporating nuclear counterforce options may be an attempt to escape India’s strategic paralysis following Pakistan’s development of tactical nuclear weapons**, which Pakistan threatens to use against Indian conventional forces should they cross certain red lines. What can India do if Pakistan uses one or several tactical nuclear weapons against Indian forces? India’s ofªcial nuclear doctrine explicitly threatens massive retaliation against any such use, which outside observers have widely interpreted as implying a major countervalue strike against Pakistani cities. Nevertheless, many have questioned the credibility of massive retaliation—whether any Indian leader would in fact order the killing of millions of innocent Pakistani civilians in response to nuclear use on Indian forces operating on Pakistani soil.4 If India chose not to retaliate with massive force, it could attempt a proportional tit-for-tat response. Such a response, however, would cede the nuclear initiative back to Pakistan, which, retaining its long-range strategic nuclear weapons, could respond by destroying one or several Indian cities. Further, pursuing such graduated options would place enormous pressure on India’s command and control system.5 Thus, **some Indian policymakers appear to be attracted to a third option: a hard counterforce strike against Pakistan’s relatively small number—perhaps several dozen—strategic nuclear assets on land (and eventually at sea) to eliminate its ability to destroy Indian strategic targets and cities.** Such a strategy would be consistent with India’s doctrine of massive retaliation—massive retaliation strategies need not be countervalue—while avoiding the credibility issues associated with a countervalue targeting strategy following Pakistan’s use of nuclear weapons on the battleªeld. One problem with a counterforce option, however, is that, **seized with the fear of a disarming strike, Pakistan would have an incentive to unleash its entire arsenal first before losing it, which in turn would encourage India to attempt a counterforce strike preemptively**—a problem given India’s NFU commitment, which most commentators have assumed would oblige India or its forces to suffer a nuclear detonation before retaliating. We argue that **these preemptive pressures associated with counterforce targeting may explain why** a number of **influential Indian officials have made a persistent and otherwise puzzling argument either that India should revise its NFU policy to permit preemption** or that preemptive use upon warning of imminent Pakistani launch is consistent with its existing NFU policy. India’s adoption of potentially preemptive counterforce options—even as a choice on a menu that otherwise consists of countervalue retaliation options— would mark a seismic shift in Indian nuclear strategy and the death knell of so-called credible minimum deterrence. Furthermore, if India construes preemption as consistent with its NFU policy and therefore preemptive counterforce as a form of massive retaliation, it may decide that no overt changes to its declaratory doctrine are necessary. As India’s former National Security Adviser Shivshankar Menon recently stated, “India’s nuclear doctrine has far greater ºexibility than it gets credit for.”6 In short, India’s national security ofªcials may have already quietly concluded that preemptive counterforce options—and associated increases in strategic force capabilities—are consistent with India’s existing nuclear doctrine. Therefore, there may be no explicit acknowledgment or indicators of this shift, which may force Pakistan to adjust its nuclear posture and strategy on the fear that it has already occurred. **Eliminating Pakistan’s strategic nuclear weapons would be tempting for India. Rather than current military plans that aim to punish Pakistan for future provocations while avoiding Pakistan’s nuclear red lines, plans for a counterforce-capable India would be able to wage whatever conventional war it prefers by eliminating the nuclear threat altogether. India might be able to reestablish deterrence against Pakistani terrorist attacks on Indian territory in ways that aborted adjustments to its conventional doctrine have failed to do.** Nevertheless, India’s ºirtation with nuclear counterforce carries signiªcant risks. First, the prospects for counterforce success even against Pakistan’s current force are questionable. Second, **India’s adoption of nuclear counterforce— or even Pakistan’s fear of its adoption—could generate not just an arms race, but dangerous “first-strike instability” where neither side could afford to go second. Absent an explicit denial of Indian interest in counterforce options, Pakistan must react to the mere possibility of their existence, given that the survivability of its strategic nuclear weapons could be at stake. Consequently, Pakistan may decide that it needs to build more nuclear forces and to adopt riskier deployment patterns to enhance survivability, heightening the danger of nuclear escalation in any future military crisis.**

#### Seventh is Hypersonics – Hypersonic warhead discrimination is impossible – weapons move too fast and follow irregular trajectory, which means countries will think they’re being attacked and launch nukes in response.

Van Loon ‘19 [Margot van Loon is a Junior Fellow at the American Foreign Policy Council, where her research focuses on defense policy, arms control, and international cooperation. As a 2018 Rosenthal Fellow, she served in the policy office for countering weapons of mass destruction at the Department of Defense, and previously worked in the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics. She holds an MPP (International and Global Affairs) from the Harvard Kennedy School of Government and a BA in International Studies from American University. DEFENSE TECHNOLOGY PROGRAM BRIEF: Hypersonic Weapons. May 2019. https://www.afpc.org/uploads/documents/Defense\_Technology\_Briefing\_-\_Issue\_18.pdf]

Hypersonic weapons are coming online just as the United States shifts its focus back to great power competition as its most pressing national security threat. To China and Russia - both of whom are rapidly modernizing their military capabilities and seeking ways to expand the role of nuclear weapons in their strategies6 - the unique characteristics of hypersonic systems (including their ability to render useless all current U.S. missile defenses) represent a perfect opportunity to take the lead in a high-stakes technological field. Russia’s “Kinzhal” aircraft-launched boost-glide vehicle is currently operational,7 and its nuclear-capable “Avangard” system will reportedly come online in 2019 (after much rhetorical fanfare from Vladimir Putin and other high-profile Kremlin officials, who have alarmingly boasted of the role such capabilities could play in a potential decapitation strike on the United States).8 China has tested multiple systems, including the “Starry Sky-2” boost-glide system and the DF-ZF unpowered glide vehicle (referred to by DoD as WU-14) that would give Beijing conventional prompt strike capability over a multi-thousand kilometer range. 9 Both countries have conducted multiple tests of these systems while continuing to funnel massive funding into hypersonics research and development (R&D)10 - two trends that, in the last year, have thrust the United States’ own hypersonic efforts into an uncomfortable spotlight. Somewhat understandably, the pace of testing and the adversarial rhetoric has contributed to perceptions and fears among American policymakers of a new arms race. However, the reality may be more tempered. James Acton, co-director of the Carnegie Endowment for International Peace, has argued that “in many ways, the United States is running a different race from Russia and China.”11 Russia and China are generally believed to take a different view of the role that hypersonic weapons can play in their strategy than the United States. Their interest appears vested in the capability of getting nuclear-armed vehicles past U.S. ballistic missile defenses. To many U.S. experts and leaders, this is not the strategic disruption it might seem. They assert that intercontinental ballistic missiles and submarine-launched ballistic missiles already give Washington, Moscow, and Beijing an unpreventable ability to launch a nuclear strike. Adding nuclear-equipped long-range hypersonic weapons that can defeat current missile defenses essentially results in the same outcome, and thus would not truly alter the strategic balance among the three powers that currently possess them.12 Rather, U.S. officials see greater potential value in the ability of conventionally-armed hypersonic weapons to disrupt the tactical dynamics of regional or theater conflicts by expanding U.S. response options without crossing the nuclear threshold.13 Certainly, hypersonic threats do not necessarily require hypersonic responses, and the logic of deterrence still matters.14 Should Beijing or Moscow field hypersonic weapons with conventional warheads, however, this would allow them “to threaten, with nonnuclear warheads, targets in Europe and eventually the continental United States that, previously, [they] could only have destroyed with nuclear weapons,”15 rendering U.S. missile defenses obsolete while holding the United States at risk and lowering the bar to full-blown military conflict.16 That said, the inadvertent escalation risk of hypersonic weapons should not be underestimated. Because of their speed and maneuverability, it would be nearly impossible to predict what facilities (or even what country) is being targeted if a country detected the launch of one of these weapons. Moreover, it would be impossible to know for certain the type of warhead it carries, meaning that a conventional strike could easily be mistaken for a preemptive nuclear attack.17

#### Even a limited nuclear war causes global famine and extinction.

Mills et al. 14 [Michael J. Mills – NCAR Earth System Laboratory, Owen B. Toon – Laboratory for Atmospheric and Space Physics and Department of Atmospheric and Oceanic Sciences at the University of Colorado Boulder, Julia Lee-Taylor – NCAR Earth System Laboratory, and Alan Robock – Department of Environmental Sciences at Rutgers State University of New Jersey "Multidecadal Global Cooling And Unprecedented Ozone Loss Following A Regional Nuclear Conflict" AGU Journals, 2-7-2014, https://agupubs.onlinelibrary.wiley.com/doi/10.1002/2013EF000205, DOA:12-1-2019 // WWBW]

Pierazzo et al. [2010] reviewed literature considering the effects of large and prolonged increases in UV‐B radiation, similar to those we calculate, on living organisms, including agriculture and marine ecosystems. General effects on terrestrial plants have been found to include reduced height, shoot mass, and foliage area [Caldwell et al., 2007]. Walbot [1999] found the DNA damage to maize crops from 33% ozone depletion to accumulate proportionally to exposure time, being passed to successive generations, and destabilizing genetic lines. Research indicates that UV‐B exposure may alter the susceptibility of plants to attack by insects, alter nutrient cycling in soils (including nitrogen fixation by cyanobacteria), and shift competitive balances among species [Caldwell et al., 1998; Solheim et al., 2002; Mpoloka, 2008]. The ozone depletion we calculate could also damage aquatic ecosystems, which supply more than 30% of the animal protein consumed by humans. Häder et al. [1995] estimate that 16% ozone depletion could reduce phytoplankton, the basis of the marine food chain, by 5%, resulting in a loss of 7 million tons of fish harvest per year. They also report that elevated UV levels damage the early developmental stages of fish, shrimp, crab, amphibians, and other animals. **The combined effects of elevated UV levels alone on terrestrial agriculture and marine ecosystems could put significant pressures on global food security. The ozone loss would persist for a decade at the same time that growing seasons would be reduced by killing frosts, and regional precipitation patterns would shift. The combination of years of killing frosts, reductions in needed precipitation, and prolonged enhancement of UV radiation, in addition to impacts on fisheries because of temperature and salinity changes, could exert significant pressures on food supplies across many regions of the globe.** As the January to May 2008 global rice crisis demonstrated, **even relatively small food price pressures can be amplified by political reactions, such as the fearful restrictions on food exports** implemented by India and Vietnam, followed by Egypt, Pakistan, and Brazil, **which produced severe shortages** in the Philippines, Africa, and Latin America [Slayton, 2009]. It is conceivable that the **global pressures on food supplies from a regional nuclear conflict could, directly or via ensuing panic, significantly degrade global food security or even produce a global nuclear famine.**

#### Independently, disease, fire, ecological damage causes massive amounts of suffering.

Edwards '17 (Paul N. Edwards; CISAC’s William J. Perry Fellow in International Security at the Freeman Spogli Institute for International Studies; 8-29-2017; "How nuclear war would affect the world climate and human health"; accessed 12-1-2019; JPark)

A U.S.-Russia war currently seems unlikely, but if it were to occur, hundreds or even thousands of nuclear weapons might be launched. The climatic consequences would be catastrophic: global average temperatures would drop as much as 12 degrees Fahrenheit (7 degrees Celsius) for up to several years — temperatures last seen during the great ice ages. Meanwhile, smoke and dust circulating in the stratosphere would darken the atmosphere enough to inhibit photosynthesis, causing disastrous crop failures, widespread famine and massive ecological disruption. The effect would be similar to that of the giant meteor believed to be responsible for the extinction of the dinosaurs. This time, we would be the dinosaurs. Many people are concerned about North Korea’s advancing missile capabilities. Is nuclear war likely in your opinion? At this writing, I think we are closer to a nuclear war than we have been since the early 1960s. In the North Korea case, both Kim Jong-un and President Trump are bullies inclined to escalate confrontations. President Trump lacks impulse control, and there are precious few checks on his ability to initiate a nuclear strike. We have to hope that our generals, both inside and outside the White House, can rein him in. North Korea would most certainly “lose” a nuclear war with the United States. But many millions would die, including hundreds of thousands of Americans currently living in South Korea and Japan (probable North Korean targets). Such vast damage would be wrought in Korea, Japan and Pacific island territories (such as Guam) that any “victory” wouldn’t deserve the name. Not only would that region be left with horrible suffering amongst the survivors; it would also immediately face famine and rampant disease. Radioactive fallout from such a war would spread around the world, including to the U.S. It has been more than 70 years since the last time a nuclear bomb was used in warfare. What would be the effects on the environment and on human health today? To my knowledge, most of the changes in nuclear weapons technology since the 1950s have focused on making them smaller and lighter, and making delivery systems more accurate, rather than on changing their effects on the environment or on human health. So-called “battlefield” weapons with lower explosive yields are part of some arsenals now — but it’s quite unlikely that any exchange between two nuclear powers would stay limited to these smaller, less destructive bombs. Larger bombs can flatten cities. Many if not most people within the blast radius — which can be up to 10 miles — would die instantly. Those who survived would wish they hadn’t, since most would die later of severe burns or awful cancers. Radioactive fallout from these weapons’ debris clouds would reach the stratosphere, where it would travel worldwide, potentially contaminating crops and livestock as well as causing radiation sickness and cancer directly. Later, this fallout would cause genetic mutations in plants, animals and human beings, as it has in the vicinity of the Chernobyl nuclear accident. Nuclear explosions would also cause immense fires. The smoke from burning buildings, oil and gas fields, refineries, chemical factories, and industrial facilities would be highly toxic. Forest fires would engulf large areas. These effects would destroy more property and kill more people.

### Indo/Pak

#### Advantage \_\_\_ is India-Pakistan war.

#### First is counterforce: India is shifting its nuclear capabilities towards counterforce – that creates incentivizes for both countries to strike first.

Clary and Narang 19 [Christopher Clary and Vipin Narang, (Christopher Clary is an assistant professor of political science at the University at Albany, State University of New York. Vipin Narang is an associate professor of political science at the Massachusetts Institute of Technology and a member of MIT’s Security Studies Program.) "India’s Counterforce Temptations: Strategic Dilemmas, Doctrine, and Capabilities" International Security, Vol. 43, No. 3 (Winter 2018/19), Pp. 7–52, https://www.belfercenter.org/publication/indias-counterforce-temptations-strategic-dilemmas-doctrine-and-capabilities, DOA:12-1-2019 // WWBW]

Is India shifting to a nuclear counterforce strategy? The conventional wisdom is that India only reluctantly acquired nuclear weapons and has been a restrained nuclear weapons power that adheres to a no-ªrst-use (NFU) policy and rejects the possibility of nuclear warªghting. Although the empirical record largely bears out its reluctance to acquire nuclear weapons,1 **India’s continued nuclear restraint is less certain.** Speciªcally, **India is developing a suite of capabilities and increasingly making statements about preemption and counterforce that appear inconsistent with its professed strategy of assured retaliation or minimum deterrence.** This article identiªes, and attempts to explain, why India has devoted considerable resources since 2003 to develop and acquire capabilities that exceed what is required for a strictly retaliatory nuclear arsenal. Speciªcally, why has India sought to build a diverse and growing number of accurate and responsive nuclear delivery systems at higher states of readiness, an increasing array of surveillance platforms, and both indigenous and imported air and ballistic missile defenses? Moreover, these **capability developments have emerged alongside an increasing number of public statements** by serving and retired Indian national security ofªcials **arguing that preemptive counterforce options against Pakistan are permissible doctrinally and advantageous strategically.**2 We argue that these apparently **discrepant capability developments are most likely the result of India’s conscious pursuit of** more ºexible options beyond countervalue targeting—namely, **counterforce options against Pakistan’s longer-range nuclear systems—and are largely not the product of either technological drift or strategic confusion.** If our assessment is correct, then these developments are an early indication of India’s exploration and development of options to target Pakistan’s strategic nuclear systems in a conºict. Unlike India’s nuclear strategy toward China, which appears to remain countervalue assured retaliation, available evidence suggests that **India may be developing options toward Pakistan that would permit it to engage in hard nuclear counterforce targeting, providing India a limited ability to disarm Pakistan of strategic nuclear weapons.**3 Such a development would entail a decoupling of India’s nuclear strategies toward its two neighbors. **A shift to incorporating nuclear counterforce options may be an attempt to escape India’s strategic paralysis following Pakistan’s development of tactical nuclear weapons**, which Pakistan threatens to use against Indian conventional forces should they cross certain red lines. What can India do if Pakistan uses one or several tactical nuclear weapons against Indian forces? India’s ofªcial nuclear doctrine explicitly threatens massive retaliation against any such use, which outside observers have widely interpreted as implying a major countervalue strike against Pakistani cities. Nevertheless, many have questioned the credibility of massive retaliation—whether any Indian leader would in fact order the killing of millions of innocent Pakistani civilians in response to nuclear use on Indian forces operating on Pakistani soil.4 If India chose not to retaliate with massive force, it could attempt a proportional tit-for-tat response. Such a response, however, would cede the nuclear initiative back to Pakistan, which, retaining its long-range strategic nuclear weapons, could respond by destroying one or several Indian cities. Further, pursuing such graduated options would place enormous pressure on India’s command and control system.5 Thus, **some Indian policymakers appear to be attracted to a third option: a hard counterforce strike against Pakistan’s relatively small number—perhaps several dozen—strategic nuclear assets on land (and eventually at sea) to eliminate its ability to destroy Indian strategic targets and cities.** Such a strategy would be consistent with India’s doctrine of massive retaliation—massive retaliation strategies need not be countervalue—while avoiding the credibility issues associated with a countervalue targeting strategy following Pakistan’s use of nuclear weapons on the battleªeld. One problem with a counterforce option, however, is that, **seized with the fear of a disarming strike, Pakistan would have an incentive to unleash its entire arsenal first before losing it, which in turn would encourage India to attempt a counterforce strike preemptively**—a problem given India’s NFU commitment, which most commentators have assumed would oblige India or its forces to suffer a nuclear detonation before retaliating. We argue that **these preemptive pressures associated with counterforce targeting may explain why** a number of **influential Indian officials have made a persistent and otherwise puzzling argument either that India should revise its NFU policy to permit preemption** or that preemptive use upon warning of imminent Pakistani launch is consistent with its existing NFU policy. India’s adoption of potentially preemptive counterforce options—even as a choice on a menu that otherwise consists of countervalue retaliation options— would mark a seismic shift in Indian nuclear strategy and the death knell of so-called credible minimum deterrence. Furthermore, if India construes preemption as consistent with its NFU policy and therefore preemptive counterforce as a form of massive retaliation, it may decide that no overt changes to its declaratory doctrine are necessary. As India’s former National Security Adviser Shivshankar Menon recently stated, “India’s nuclear doctrine has far greater ºexibility than it gets credit for.”6 In short, India’s national security ofªcials may have already quietly concluded that preemptive counterforce options—and associated increases in strategic force capabilities—are consistent with India’s existing nuclear doctrine. Therefore, there may be no explicit acknowledgment or indicators of this shift, which may force Pakistan to adjust its nuclear posture and strategy on the fear that it has already occurred. **Eliminating Pakistan’s strategic nuclear weapons would be tempting for India. Rather than current military plans that aim to punish Pakistan for future provocations while avoiding Pakistan’s nuclear red lines, plans for a counterforce-capable India would be able to wage whatever conventional war it prefers by eliminating the nuclear threat altogether. India might be able to reestablish deterrence against Pakistani terrorist attacks on Indian territory in ways that aborted adjustments to its conventional doctrine have failed to do.** Nevertheless, India’s ºirtation with nuclear counterforce carries signiªcant risks. First, the prospects for counterforce success even against Pakistan’s current force are questionable. Second, **India’s adoption of nuclear counterforce— or even Pakistan’s fear of its adoption—could generate not just an arms race, but dangerous “first-strike instability” where neither side could afford to go second. Absent an explicit denial of Indian interest in counterforce options, Pakistan must react to the mere possibility of their existence, given that the survivability of its strategic nuclear weapons could be at stake. Consequently, Pakistan may decide that it needs to build more nuclear forces and to adopt riskier deployment patterns to enhance survivability, heightening the danger of nuclear escalation in any future military crisis.**

#### Second is miscalculation: India and Pakistan are developing naval nuclear capability to deter first strikes – nukes on submarines are uniquely liable to miscalculation.

Hundley 18 [Tom Hundley, (Tom Hundley is a senior editor at the Pulitzer Center on Crisis Reporting.) "India and Pakistan are building nuclear-armed submarines" Vox, 4-4-2018, https://www.vox.com/2018/4/2/17096566/pakistan-india-nuclear-war-submarine-enemies, DOA:12-18-2019 // WWBW]

**The Pakistan navy is likely to soon place nuclear-tipped cruise missiles on** up to three of its five French-built diesel-electric **submarines**. It has also reached a deal with China to buy eight more diesel-electric attack submarines that can be equipped with nuclear weapons. These are scheduled for delivery in 2028. Even more disturbing, Pakistani military authorities say they are considering the possibility of putting nuclear-tipped cruise missiles on surface vessels like the Zulfiqar. Pakistan says its decision to add nuclear weapons to its navy is a direct response to India’s August 2016 deployment of its first nuclear submarine, the Arihant. A second, even more advanced Indian nuclear submarine, the Arighat, began sea trials last November, and four more boats are scheduled to join the fleet by 2025. That will give India a complete “nuclear triad,” which means the country will havethe ability to deliver a nuclear strike by land-based missiles, by warplanes, and by submarines. The submarine is the key component. It’s considered the most “survivable” in the event of a devastating first strike by an enemy, and thus able to deliver a retaliatory second strike. In the theology of nuclear deterrence, the point of this unholy trinity is to make nuclear war unwinnable and, therefore, pointless. **When it comes to India and Pakistan**, by contrast, **the new generation of nuclear submarines could increase the risk of a devastating war** between the two longstanding enemies, not make it less likely. India and Pakistan have gone to war four times since 1947, when Britain partitioned what had been a single colony into Hindu-majority India and Muslim-majority Pakistan. They have been in a state of constant hostility ever since, and for the past two decades, they have been locked in a frightening nuclear arms race on land. Pushing the contest into the Indian Ocean makes the situation even more dangerous by loosening the chain of command and control over the weapons, increasing the number of weapons, and placing them in an environment where things tend to go wrong. “The nuclearization of the Indian Ocean has begun,” Zafar Jaspal, a nuclear security expert at Islamabad’s Quaid-i-Azam University, told me. “Both states have now crossed the threshold.” This should be setting off alarms throughout the international community. **Growing numbers of nuclear weapons will soon be deployed to submarines patrolling some of the most bitterly contested waters on earth** — and controlled by jittery and potentially paranoid officers on perpetual high alert about a surprise attack from the other side. The result is a game of nuclear chicken every bit as dangerous as the “my button is bigger than yours” competition between Donald Trump and Kim Jong Un on the Korean Peninsula. The difference here is that this one is going almost completely unnoticed. Putting nukes on submarines makes a nuclear war much more likely The modern nuclear-powered, nuclear-armed submarine is arguably the most fearsome weapon ever conceived. The US Navy has 18 Ohio-class boats, four of which can carry 154 cruise missiles apiece. The submarines can travel beneath the sea for months, virtually undetectable, and their range is limited only by the crew’s endurance and food supply. When we talk about nuclear submarines, we talk about two different, but related, things: what powers the subs, and what kinds of weapons they carry. The US, Russia, the UK, France, and China have nuclear-powered submarines that are also armed with nuclear weapons. Israel is thought to have submarines that are armed with nuclear warheads, but they’re powered by diesel-electric generators. That matters because those types of submarines, unlike the nuclear-powered ones made by America and other major world powers, are noisy — and thus easier to track — and can generally stay underwater for only a week or two at most. India has spent billions of dollars to join that exclusive club — and came close to disaster. The $2.9 billion Arihantnearly sank a few months after its commissioning when a hatch was left open and seawater flooded the propulsion compartment. The embarrassing mishap, blamed on “human error,” was hushed up by the ministry of defense. Even India’s senior political leadership was kept in the dark. The boat has been undergoing extensive repairs since February 2017, according to a January 8 report in the newspaper the Hindu, which was the first to report the entire saga. Meanwhile, India’s “other” nuclear submarine, the INS Chaka — an Akula-class submarine on loan from Russia primarily for training purposes — is also in dry dock after an unspecified accident damaged its sensitive sonar equipment. In February, Russia sent India a $20 million bill for repairs. Pakistan, for its part, announced last year that it had successfully test-fired a submarine-launched cruise missile capable of carrying a nuclear warhead. That was a clear indication that the country wanted to start arming its submarines with nukes. It had already signaled that it was willing to put nukes on some of its surface ships. The problem is that **putting nukes at sea significantly weakens the chain of command and control over the weapons, which means the risk of an accidental exchange of fire — or full-on nuclear war — between India and Pakistan will increase exponentially.** Up until now, both Pakistan and India have implemented rigorous checks to keep their weapons safe and eliminate the possibility of inadvertent or rogue launches. In India, ultimate authority in the chain of command and control rests with the country’s civilian political leadership. In theory, Pakistan’s nuclear trigger is also in civilian hands. A body called the National Command Authority, headed by the prime minister, must authorize any decision to use nuclear weapons. But in reality, it is the military, widely regarded as the most stable and disciplined institution in the country, that controls all aspects of the country’s nuclear program. Equally important, **both India and Pakistan have kept their warheads and delivery systems “de-mated” — that is, the nuclear warhead is stored far away from the missile that would deliver it.** Or in the case of India’s bombs, the trigger or detonator is kept far from the fissile core. But **at sea** — and especially when you go beneath the sea — **this is pretty much impossible.** The warheads and missiles have already been assembled and stored in the same place, and **individual submarine captains have significant freedom to decide whether to launch their nukes.** “The new danger for both countries is that the problem of command and control over the submarines becomes very tenuous,” said Pervez Hoodbhoy, a Pakistani nuclear physicist and frequent visiting scholar at Princeton University, where we spoke last summer. “With land-based weapons, the warhead is separated from the delivery system. You can’t do that with warheads on a submarine. When it leaves the port, it is already armed.” Hoodbhoy said that leaves military planners with two options: “Either you do not give the arming code to the captain … or you give it to him before he leaves the port and he can, of his own accord, launch a nuclear missile.” In submarine warfare, the glaring weak link in the chain of command has always been communication between the sub beneath the sea and the central command. **Normal radio waves cannot penetrate the ocean’s depths. To communicate with a submerged submarine**, very low frequency (VLF) and extremely low frequency (ELF) radio transmissions are necessary. These **frequencies cannot carry voice communications, only coded messages or** — at a snail’s pace — **text** messages. **It’s also difficult for the subs to receive communications of any kind if they’re submerged too deeply.** These communications are also strictly one-way; subs can hear what ground commanders are telling them but can’t reply or ask questions. “Essentially the submarine is on its own,” said Hoodbhoy, adding that “it can’t communicate back” unless it sticks an antenna above the surface and potentially reveals its location. Hiding beneath the ocean, almost impossible to detect, nuclear submarines have the great advantage of being able to survive a nuclear strike by an enemy nation and launch a devastating second-strike response. The same can’t be said for the land-based VLF transmitters that give the subs their orders. These are impossible-to-hide sitting ducks, vulnerable to enemy attack in a first strike. Knock out these installations and the submarines are operating blind. If you watch Denzel Washington and Gene Hackman fight it out in the underwater thriller Crimson Tide, you get a pretty accurate picture of how things can go south quickly in the extreme isolation of a nuclear submarine cut off from its centralized command. Pakistan and India went to the nuclear brink during a 1999 war in the disputed territory Kashmir, coming closer to pulling the trigger than even the US and Soviet Union during the 1962 Cuban missile crisis. The Kashmir issue continues to roil both countries, so it’s not hard to imagine a Crimson Tide scenario in which an Indian submarine commander, aware that his country is under attack, receives an incomplete or unclear order to launch. What does he do? Here’s another scenario: India knocks out Pakistan’s only VLF transmitter in Karachi. The beleaguered commander of one of Pakistan’s diesel-electric submarines — lost in the fog of war, unable to communicate with the National Command Authority, and under attack by one of India’s highly capable anti-submarine hunters — launches a cruise missile. Is it armed with a conventional warhead or a nuclear warhead? Do Indian authorities wait until it hits a major population center to find out? Or do they order an immediate retaliatory attack? Experts who have modeled an India-Pakistan nuclear exchange say that once the first nuke is launched, it would be nearly impossible for either side to deescalate. That means each side would likely attempt to unleash its entire arsenal of 100 or more nuclear weapons on the other side’s population centers. The ensuing firestorm would release a cloud of radioactive ash that would darken skies, cool temperatures, and disrupt agriculture around the globe for a decade or more. Millions would die, and millions more would be faced with displacement and starvation as we enter what scientists have termed nuclear winter. In many ways, **the power to start — or prevent — such devastation rests in the hands of individual submarine commanders.** During the Cold War, US submarines had a “two-man rule” that required a commander (Hackman’s character in Crimson Tide) and executive officer (the part played by Washington) to agree that a launch order was valid. As Cold War tensions eased, the two-man rule was replaced by a more rigorous system of checks that require the sub commander to utilize an externally provided code in order to launch. India has not said how it will maintain control of its submarines. “There’s a lot of confusion and not much clarity on this,” said Yogesh Joshi, an analyst at Stanford University who is writing a book on India’s nuclear submarine program. “They are acting as if this is something still in the future, something they can think about later.” **The situation will become even more fraught if Pakistan follows through on its threat to arm its surface vessels with nuclear weapons. In that scenario, some ships will carry nuclear weapons and some won’t. This ambiguity creates all kinds of new pathways for mistakes, misunderstandings, miscalculations, and mischief.** If a missile is launched from one of these ships, how will India know whether it is a nuke or not? “That will lead us to Armageddon,” warned Abhijit Singh, a former Indian naval officer and current senior fellow at the Observer Research Foundation, a New Delhi think tank.

### US/Russia

#### Advantage \_\_\_ is US Russia war.

#### First is Religion: the annexation of Crimea created a schism between Ukrainian and Russian Orthodox churches that can easily escalate and draw in the US.

Beebe 19 [George S. Beebe, (GEORGE S. BEEBE is the Vice President and Director of Studies at the Center for the National Interest, a non-partisan thinktank in Washington, D.C. He served in the US government for nearly twenty-five years, including as director of Russia analysis at CIA and as a White House adviser on Russia matters for Vice President Dick Cheney. He lives in northern Virginia.) "The Russia Trap" Thomas Dunne Books, 9-3-2019, https://us.macmillan.com/books/9781250316622, DOA:1-27-2020 // WWBW]

\*\*\*NOTE – Beebe is not making a prediction, but illustrating how escalation easily could occur – he thinks small religious conflicts could easily spark all-out war but doesn’t believe they definitely will

\*\*\*MP – Moscow Patriarchate

\*\*\*KP – Kiev Patriarchate

**The** 2014 **Russia-Ukraine crisis has precipitated one of the largest schisms in Orthodox Christian history.** Millions of worshippers are caught in the middle of a struggle for political control between Moscow and Kiev. The present conflict has its roots in 1686, when the Ecumenical Patriarch of Constantinople granted the Russian Orthodox Church (ROC) conditional jurisdiction over the Kiev Metropolis. This arrangement has remained unchanged for over three centuries, but the Soviet collapse and Ukraine’s subsequent attainment of statehood have elicited a host of difficult political questions dividing Ukrainian public opinion: How does nationality intersect with religious identity in an overwhelmingly Orthodox state? Does fealty to the Moscow Patriarchate compromise Ukrainian national sovereignty? **The majority of Ukraine’s Orthodox parishes** currently **belong** to the Ukrainian Orthodox Church **under the Moscow Patriarchate** (UOC-MP), subordinate to the ROC. **In 1992, a faction** led by the newly proclaimed “Patriarch of Kiev,” Filaret Denysenko, **broke off** from the UOC-MP **to assert its autonomy from Moscow. This spiritual project has proved popular with Ukrainian nationalists**, who have long expressed displeasure at the political messaging scattered throughout some **Russian Orthodox liturgies**; most strikingly, these **include prayers for the health and safety of the Russian armed forces. The schism came to a head with the annexation of Crimea**, when Ukrainian president Petro Poroshenko took up the cause of the Kiev Patriarchate (UOC-KP) as an assertion of Ukrainian “spiritual independence” from Russia. But over the span of its existence, the UOC-KP has not been recognized by any other Orthodox church; the Russian-aligned UOC-MP remained the sole Orthodox authority in Ukraine. In a bid to secure international legitimacy, **Ukraine lobbied the Constantinople Patriarch for a certification of autocephaly, or full self-government. It was granted this** document, a Tomos in Orthodox terminology**, in January 2019.** Shortly afterward, the UOC-KP and smaller Ukrainian Autocephalous Orthodox Church (UAOC) were merged into the new Ukrainian Orthodox Church. The UOC-**MP**, with its twelve thousand parishes across Ukraine, **is regarded by Ukrainian nationalists as a national security threat and stands on the verge of being branded as an illegitimate sect within Ukraine.** Around seventy parishes have opted to join the Ukrainian Orthodox Church, but what will become of the less willing? Several UOC-MP **priests have unequivocally stated their resolve to die in defense of their churches and monasteries.** Meanwhile, the Russian Orthodox Church is accusing Ukrainian authorities of seizing and vandalizing UOC-MP property with increasing frequency. The Ukrainian Rada has already passed an unprecedented law allowing church allegiance to be switched by majority vote, further increasing the likelihood of conflict within UOC-MP communities. From this point, it is easy to imagine how events might begin to spiral out of control. Ukraine’s president is unlikely to seek outright physical confrontation with the UOC-MP, but Ukrainian nationalists to his right have proved themselves less restrained. **Right Sector, a prominent nationalist coalition, sees the** UOC-**MP leadership structure as wartime traitors, hostile foreign agents who cynically undermine Ukrainian national sovereignty under the cover of religion.** Over the past year, Right Sector has staged several large street confrontations outside of UOC-MP churches to disrupt ongoing religious services. These ongoing efforts are likely to intensify and become more frequent, as the granting of autocephaly has cast the dispute over UOC-MP church property in a new political light. **Imagine**, then, that a large group of Ukrainian nationalists blockades yet another UOC-MP church, as they have recently done in the Volyn Oblast of northwestern Ukraine. The priest arrives shortly thereafter, accompanied by a small congregation. Against a cacophony of jeers and threats of violence, he insists on entering his church to hold regularly scheduled services. As he pushes his way through the crowd, someone throws a stone at the back of his head. He collapses at the footsteps of his church. An ambulance is called, and responders pronounce him dead on the spot from a fatal concussion. **The religious cold war in Ukraine begins to turn hot. Tens of thousands of Russian Orthodox believers march in protest against the violence in Ukraine. Hundreds of private Russian citizens cross the border armed with pistols, rifles, and other small arms, intent on preventing further Ukrainian attacks and defending what is seen as Russian Orthodox property. The US State Department attempts to defuse tensions with a statement condemning violence, affirming the importance of religious freedom, and supporting Ukraine’s right to handle its own internal affairs in accordance with democratic principles.** The Russian response does not prove nearly as restrained. Since the presidential election of 2012, Russian president Putin has had to contend with growing Communist and nationalist movements on his political right flank. They accuse Putin of not doing enough to defend Russian interests with military force and complain that he naïvely seeks compromise with the West when he should instead be taking aggressive measures to roll back NATO influence in Russia’s legitimate sphere of interest. According to one particularly popular Communist critique, Putin has failed to protect the predominantly Russian-speaking people of Donbass from what is portrayed as a Ukrainian ethnic-cleansing campaign.15 The Communists charge, with overwhelming popular support, that this killing of a priest demonstrates the need to act immediately and decisively to protect Russian compatriots in Ukraine. They use this opportunity to again demand formal Russian recognition of the Donetsk People’s Republic (DPR) and the Luhansk People’s Republic (LPR), something that they have sought since 2015. Putin has to this point resisted calls for open and direct Russian military involvement in Donbass, a move that would invite serious international repercussions. But doing nothing in the face of the Ukrainian religious violence would play into the hands of his detractors, whose hawkish calls to action reflect the country’s mood better than Putin’s caution. Actively preventing Russian mercenaries from defending their co-religionists would be seen as an act of betrayal. The Kremlin settles for a response that stops just short of recognizing the Donbass: **Russian emergency ministry units, supported by the Russian national guard, will cross into Donbass to establish a safe zone around the Luhansk area, replete with field hospitals to treat Ukrainians wounded over the course of the civil conflict. Kiev calls this move not merely an invasion but an act of war, and it appeals to Washington for immediate military aid. Poland supports this call and offers to host additional American military forces to respond to Russia’s aggression.** With Congress and influential segments of American public opinion demanding a forceful response, **the White House has neither the political capital nor the diplomatic tools to de-escalate with Moscow. American tactical missile defense systems, air assets, artillery, and heavy armor pour into western Poland** over the next several weeks. The US president announces that he has ordered US military personnel that had been rotating through Poland on temporary assignments to be increased in number and stationed along the border with Ukraine, ready for action should Russian military forces move toward the western portions of Ukraine. He explains that this show of force is not to help Kiev retake Donbass but to be ready to defend the rest of Ukraine against Russia. Moscow views the US announcement with alarm. **Despite Washington’s denials, Russian military leaders conclude that Washington and Kiev are preparing for joint military action against Donbass.** From here, both sides become constrained by an increasingly narrow field of policy options. Moscow officially recognizes Donetsk and Luhansk as independent of Ukraine in a desperate last bid to deter what it sees as an imminent invasion. To protect what it has now acknowledged as two sovereign states, Russia establishes and enforces a no-fly zone across Donbass while stationing military forces across the border from Kiev-controlled territory. **The United States, in turn, has no choice but to support a Ukrainian military buildup on the other side of the Donbass border, putting the two sides within a hair’s breadth of kinetic conflict.** A single shot across the unofficial border serves as the spark to **war**. It was not ordered in Moscow, Kiev, or Washington, however. Rather, **it comes from the many “volunteer” forces active in and around the Donbass region, including the Kuban Cossack Host, which had long threatened to “come to the defense of our homeland and mother church” in response to acts of persecution against Russian Orthodox believers, and from ultranationalist paramilitary groups within Right Sector that had long been convinced that the Ukrainian government is unable or unwilling to take the steps necessary to retake Donetsk and Luhansk**. As limited conventional skirmishing between Russian and Ukrainian forces begins, the United States does its best to avoid being drawn directly into the fighting, providing intelligence, arms, and advice to Ukrainian forces while keeping its own forces far from the line of contact, ready to defend against a Russian offensive. But **a Ukrainian-operated antiaircraft unit shoots down a Russian fighter plane on combat air patrol over the Donbass, and Russian aircraft and artillery retaliate against several sites where US advisers were assisting Ukrainians, killing four American military personnel. A direct US-Russian military conflict starts climbing the ladder of escalation.**

#### Second is Cyber: Russian cyberattacks on Ukraine could draw in the US and cause escalation – cyber professionals see Washington’s response to previous attacks as insufficient – that causes strong retaliation.

Beebe 2 [George S. Beebe, (GEORGE S. BEEBE is the Vice President and Director of Studies at the Center for the National Interest, a non-partisan thinktank in Washington, D.C. He served in the US government for nearly twenty-five years, including as director of Russia analysis at CIA and as a White House adviser on Russia matters for Vice President Dick Cheney. He lives in northern Virginia.) "The Russia Trap" Thomas Dunne Books, 9-3-2019, https://us.macmillan.com/books/9781250316622, DOA:1-27-2020 // WWBW]

\*\*\*NOTE – Beebe is not making a prediction, but illustrating how escalation easily could occur – he thinks cyber conflicts could easily spark all-out war but doesn’t believe they definitely will

The highly sophisticated, Russia-generated NotPetya malware attacks in Ukraine in 2017 quickly spilled out of control beyond Ukrainian borders and into networks across the world, inflicting more than $10 billion worth of damage and constituting the most destructive malware attack in history. The **American** **response**—indicting some named Russian individuals and adding new economic sanctions to those already in force against Russia**, struck many cyberprofessionals as incommensurate to the severity of the damage.** “The lack of a proper response has been almost an invitation to escalate more,” commented one.16 **The next time Russia launched an attack**, many advised, **the United States should actively disrupt Russian cybercapabilities and impose much higher costs for such reckless aggression. Imagine**, then, **a scenario in which a new cyberweapon is unleashed on Ukraine that targets gas pipeline control systems.** Its effect is nearly instantaneous, shutting down valve control systems and pumping stations and bringing the flow of gas through Ukrainian pipelines to a halt. Because the halt is brief, and because the attack occurs in summer, the impact on European gas supplies is not nearly as severe as it would be in cold weather, but the intended message seems clear. Ukrainian, European, and American governments issue immediate condemnation of the attacks and all but officially accuse Russia of responsibility. Moscow denies any involvement. **Russia’s foreign ministry spokesperson suggests that Ukrainian hackers had launched the attack themselves in what she calls a “provocation.”** Russian cybersecurity experts say Ukrainian criminal hackers who had been part of a transnational cybercrime group had initiated the crisis using Russian botnets and imitating Russian techniques. Their aim had been nothing more than extortion against Ukrainian government officials. **US and European audiences find the Russian counteraccusation risible. The perception of bald-faced Russian lying only reinforces American determination to act.** Leaders at US Cyber Command urge the White House to draw a firm line. Issuing toothless legal indictments that have little chance of putting any Russian hackers behind bars would only underscore American powerlessness in the face of such attacks, they counsel. **They ask for authorization to mount a reciprocal and proportionate attack on Russian infrastructure, reverse engineering the Russian malware and redirecting it against valve control systems and pumping stations in Russia.** The White House agrees. Within weeks, Russia experiences a brief disruption of gas flows. The economic impact is minimal, but the psychological effect is significant. The United States, it seems, has removed the gloves on offensive cyberoperations. Events soon begin to accelerate. As markets open on Wall Street several weeks later, traders experience a series of short “flash” outages of their online systems that result in the loss of several trillion dollars. Intermittent trading outages continue over the course of the few days, and trading is halted as stock and bond markets begin to plunge. FBI investigators strongly suspect that Russia is behind the attacks. The US Treasury secretary warns that sustained Wall Street losses could have a devastating domino effect on the American economy, producing a collapse of confidence from which it might be difficult to recover. If investors lose faith in the stability of the American economy, the foreign credits on which the financing of America’s massive national debt depends could grow dangerously more expensive. In response, the American president draws a firm redline. He telephones the Russian president and states that cyberinterference with the US financial system constitutes an attack on critical American infrastructure that poses an existential threat to US national security. US policy allows for a kinetic response to such cyberattacks. He has no desire to attack Russia, he says, but unless Russia’s cyberattacks stop immediately, he will be forced to take military action, which he insists will be narrowly targeted and proportional. He counsels his counterpart to remove personnel from the Internet Research Agency building in Saint Petersburg as a precaution to minimize the chances of civilian deaths. In Moscow, the Russian Security Council convenes a meeting on the growing crisis. One official recalls the critical role that an informal back channel between Bobby Kennedy and the Soviet ambassador had played resolving in the 1962 Caribbean crisis, but others point out that Russia’s current ambassador has long been frozen out of contact with anyone who matters in the US administration. **Russian military officials, fearing the possibility of conventionally armed Tomahawk or drone attacks on key cyberunits, urge the Kremlin to authorize a “demonstration” event to discourage American aggression.** Since many of America’s precision-targeted munitions depend on satellite-guidance systems, they argue, Russia should use ground-based weapons to temporarily disable a US global positioning system (GPS) satellite. **By “escalating to de-escalate,” the action would show Washington that Russia can and will defend itself against attacks and bring US decision-makers to their senses.** The Russian president approves the operation. But the “temporary” disabling of a single GPS satellite proves to be more damaging and more enduring than the Russians had expected. The satellite remains out of service for three days, and its outage has a cascading effect on the twenty-three other satellites in the US GPS constellation. Synchronization failures disrupt the entire system. Though it is popularly regarded as a mapping system, GPS in fact is an enormous space-based timing device vital to a wide range of government and commercial functions. Telecommunication networks rely on GPS clocks to allow cell towers to transfer calls. Electrical power grids use GPS to balance current flows. ATMs and credit cards cannot function without GPS time-stamping. Even computer network synchronization depends on GPS clocks.17 And much to Moscow’s surprise, its disabling of a single satellite brings all of this activity and more to a grinding halt. **Americans are shocked to learn that the US government has no effective backup system in place. Outrage over the Russian satellite attack quickly mounts. Congress demands that the White House respond, and it passes an immediate authorization for the president to use any and all means he deems necessary to end the Russian aggression.** Pentagon officials tell the president that under the circumstances, they cannot be confident that Russia will not target even more critical C3ISR satellites next, which might cripple the United States’ ability to receive early warning of a Russian missile attack or to communicate with its conventional or nuclear forces. Piggybacking on the Pentagon warning, the NSA and CIA report that they have detected what they believe is a Russian cyberpenetration of a C3ISR communications network, and they cannot determine whether the intrusion is meant to monitor or disable the system. **All concur that unless the president strikes back against the Russians immediately, he might lose the ability to defend the United States altogether. They urge an immediate retaliatory attack on all Russian ground-based ASAT facilities, in addition to targeting Russia’s cyberunits and its GLONASS counterpart to the US GPS system. The march up the ladder of military escalation begins skipping rungs.**

#### Diplomacy fails – each side sees the other as an existential threat, which causes ‘escalation to de-escalate’ and serves as an impact multiplier.

Beebe 3 [George S. Beebe, (GEORGE S. BEEBE is the Vice President and Director of Studies at the Center for the National Interest, a non-partisan thinktank in Washington, D.C. He served in the US government for nearly twenty-five years, including as director of Russia analysis at CIA and as a White House adviser on Russia matters for Vice President Dick Cheney. He lives in northern Virginia.) "The Russia Trap" Thomas Dunne Books, 9-3-2019, https://us.macmillan.com/books/9781250316622, DOA:1-27-2020 // WWBW]

If they are to some degree distortions, what is the significance of these perceptions of deadly intent in Moscow and Washington? Despite deep mistrust and suspicion, neither side truly expects an imminent nuclear or conventional military attack designed to destroy the other. The stakes are too great, and the odds of success are too long, for anyone to contemplate such a suicidal course. But these **perceptions** nonetheless **make unplanned disaster more likely.** For one thing, **when each side believes the essence of the threat derives from the very nature of the other side, which cannot change, there is little incentive to seek compromise.** Indeed, aiming for a **negotiated settlement is seen as dangerous appeasement.** Such efforts are viewed as “worse than useless; they contribute to weakening of national will and reduce a country’s readiness to win the inevitable conflict when it finally comes. By this logic, **it seems more prudent and certainly more politically advantageous to abandon any effort to avoid that conflict.**” 122 More ominously, **these perceptions are reinforcing each other in a vicious cycle of interaction.** They shape the narratives that determine how events are interpreted, and they provide the cognitive filters that determine which facts are salient and which are disregarded. This in turn drives statements and actions that reinforce the threat perceptions on each side and heighten each side’s sense of vulnerability. **Russia’s great power aspirations fuel American concerns about imperialism, which strengthens US support for building West-leaning bulwarks against Russia’s influence along the country’s periphery. This stokes fears in Russia of hostile encirclement and regime change, which encourages Russian aggression in neighboring states and internal crackdowns on media and opposition groups, further convincing Americans that the Kremlin has imperial designs and sees democracy as an ideological foe.** Russia tries to cool America’s ardor for democratization crusades by cybermeddling, which the United States interprets as an existential threat and responds with punitive economic sanctions and steppedup cyberactivity of its own, all meant to deter further Russian meddling. This, however, only further convinces Moscow that Washington is accelerating its aggressive bid to weaken and destroy Russia. Left unaddressed, **this cycle of perception is likely to deepen, increasing the likelihood that the two sides will misinterpret the signals each sends in a crisis and overreact to the actions of the other side.** When a state believes its very existence is at stake, its resolve and willingness to take risks in conflict or crisis situations run startlingly high. Failure to appreciate that resolve can have serious consequences, as Europe and the United States experienced in 2014 in underestimating Moscow’s likely response to the Maidan uprising in Ukraine, and as Russians encountered in 2016 in failing to anticipate the ways America might react to election meddling. **And when this strong resolve and high risk tolerance are overlaid against a background of increasingly unconstrained shadow warfare between two nuclear powers in the cyber, military, economic, and information domains, they assume disproportionately dangerous implications.**

### Whole Res

#### Advantage \_\_\_ is miscalculation

#### First is accidents – historical near-misses and security failures prove accidents are inevitable – it’s only a matter of time. Deterrence fails – it doesn’t account for irrational leaders or new technology.

Patrick and Evanoff 19 [Stewart M. Patrick and Kyle L. Evanoff, (Stewart M. Patrick is James H. Binger senior fellow in global governance and director of the International Institutions and Global Governance (IIGG) Program at the Council on Foreign Relations (CFR). His areas of expertise include multilateral cooperation on global issues; U.S. policy toward international institutions, including the United Nations; and the challenges posed by fragile and post–conflict states. Patrick is the author of The Sovereignty Wars: Reconciling America with the World, as well as Weak Links: Fragile States, Global Threats, and International Security. He also writes the blog, The Internationalist. Kyle L. Evanoff—research associate for International Institutions and Global Governance at the Council on Foreign Relations.) "The Lingering Specter of Nuclear War" Council on Foreign Relations, 3-7-2019, https://www.cfr.org/blog/lingering-specter-nuclear-war, DOA:1-27-2020 // WWBW]

However, **the historical record provides ample grounds for concern**, given how close nuclear powers have come to using these weapons against one another, both intentionally and inadvertently. The **litany of near-misses and false alarms makes for sobering reading.** During the 1962 Cuban Missile Crisis, U.S. President John F. Kennedy assessed the likelihood of nuclear war to be more or less a coin flip. In 1995, Russia misinterpreted a Norwegian rocket launch as a possible attack. And just last year, the State of Hawaii’s Emergency Management Agency erroneously issued an incoming ballistic missile alert. Seth **Baum**, executive director **of the Global Catastrophic Risk Institute, estimates the rate of such incidents at one per year.** **Magnifying the risk** of accidental or unauthorized nuclear war **is uncertainty over** the **security** of command and control structures to manage and use these weapons. In his harrowing 2017 tell-all, The Doomsday Machine: Confessions of a Nuclear War Planner, Daniel Ellsberg (of Pentagon Papers fame) chronicles the pathologies of the early U.S. nuclear apparatus. These included **strong incentives to subordinate safety to offensive readiness, as well as “safeguards” against unauthorized use that consisted of little more than a sealed envelope.** Given these shortcomings, Ellsberg notes, Stanley Kubrick’s classic satire Dr. Strangelove bore uncanny resemblance to a documentary. The same **vulnerabilities may afflict more recent nuclear powers**, not least Pakistan and North Korea. Meanwhile, nuclear **proliferation and tech**nological innovation **are undermining** much of the game theoretic logic of **deterrence**, which has long been central to nuclear strategy. In its most basic form, **deterrence** relies on the threat of retaliation to discourage adversaries from striking. The logic works best in a simple bilateral contest between rational, unitary actors. It **begins to falter in a messier world** of multiple countries, fragmented national authorities, and irrational leaders. Technological innovation also complicates nuclear deterrence. **Cyberweapons, antisatellite weapons, hypersonic missiles, artificial intelligence, and other innovations are** challenging longstanding assumptions, blurring distinctions between conventional and nuclear war, and **exacerbating ambiguities in the international balance of power.** Deterrence, in sum, is becoming a riskier bet.

#### Second is ambiguity – the fog of war means conventional strikes get misinterpreted.

Gower 18 [John Gower, (John Gower is a retired rear admiral from the Royal Navy with thirty-six years’ service. His last six years in service were spent in the UK Ministry of Defence, responsible for policy advice and formulation on countering weapons of mass destruction, arms control, and counterproliferation and particularly UK and NATO nuclear weapons policy. He now works as an independent consultant.) "The Dangerous Illogic of Twenty-First-Century Deterrence Through Planning for Nuclear Warfighting" Carnegie Endowment for International Peace, 3-6-2018, https://carnegieendowment.org/2018/03/06/dangerous-illogic-of-twenty-first-century-deterrence-through-planning-for-nuclear-warfighting-pub-75717, DOA:1-27-2020 // WWBW]

In the twenty-first century, **the fog of crisis** (or of conflict) **will likely be made more impenetrable by misinformation and cyber** activities. **Inflammatory rhetoric and** the multiplicity of potentially **confusing messages** emanating from one of the nations involved will **exacerbate the situation.** This is a perfect setting for miscalculation. **The fear of suffering a** first decapitating or **disabling nuclear strike is pervasive** in a crisis. It is likely that elements of less than strategic nuclear capabilities will be delivered by dual-use platforms or missiles. The possession of systems and mindsets capable of limited, less-than-strategic battlefield nuclear employment multiplies this fear through mirroring of one’s own options. **The chance that a conventional attack by a dual-capable system is perceived to be a nuclear first strike increases significantly during a conflict between nuclear-capable states.** Indeed, retaining **dual-capable aircraft** or air- or ground-launched nuclear cruise missiles, while also possessing a conventional equivalent, **raises the likelihood of miscalculation** in such circumstances from quite possible **to** near **probable**. If dual-capable weapons systems become stealthier, the certainty of their detection and classification would be reduced further. **Doubt further increases the risk of miscalculation.** Thus, of all the current and potential nuclear capabilities, the introduction of stealthy nuclear cruise missiles that can be launched from dual-capable platforms offer the greatest risk of miscalculation.

#### Third is AI – policymakers are afraid of AI counterforce which creates a ‘use it or lose it’ situation.

Geist and Lohn 18 [Edward Geist, Andrew J. Lohn, (Edward Geist is an associate policy researcher at RAND. Previously a MacArthur Nuclear Security fellow at Stanford University’s Center for International Security and Cooperation (CISAC) and a Stanton Nuclear Security Fellow in RAND’s Washington office, Edward received his doctorate in Russian history from the University of North Carolina in May 2013. Andrew J. Lohn is an engineer at the RAND Corporation. He applies a wide range of mathematical and machine learning techniques to provide new insights into highly technical policy issues, such as cyberwarfare, artificial intelligence, or drone delivery. Lohn holds a doctorate in electrical engineering from the University of California, Santa Cruz.) "How Might Artificial Intelligence Affect the Risk of Nuclear War?" The Rand Corporation, 2018, https://www.rand.org/pubs/perspectives/PE296.html, DOA:1-27-2020 // WWBW]

Although 20th-century AI struggled to actualize these applications, more-recent advances in computing could release their potential. Such contemporary techniques as deep learning are dramatically advancing machine vision and other signal processing applications, which can enhance autonomy and sensor fusion. Autonomy and sensor fusion may be of paramount strategic relevance because they could greatly improve ISR, ATR, and terminal guidance capabilities. All of these might severely erode the means by which nuclear powers assure the survivability of their nuclear forces. Because increased weapon accuracy has long since undermined the survivability of silo-based ICBMs, the United States, Russia, and China put nuclear weapons on submarines and mobile ICBMs that were deemed more likely to survive a first strike. **Technologies that make it more likely that survivable forces** (such as submarine and mobile missiles) **could be targeted and destroyed make it more plausible that one country might threaten a first strike. This undermines strategic stability**, because **even if the state possessing these capabilities has no intention of actually using them, the adversary cannot be sure of that.** A major challenge of nuclear strategy is that **adversaries may interpret one nation’s secure retaliatory forces as a first-strike threat** or a doomsday machine and react accordingly. Thus, the capabilities can still be used to pressure potential adversaries and perhaps extract concessions during a crisis. Such a capability does not have to be exploited during a crisis to be politically useful. As Alfred T. Mahan observed, “force is never more operative than when it is known to exist but is not brandished” (Mahan, 1912, p. 105). **As long as adversaries fear that the capability may exist, they can be cowed into submission without explicit confrontation—the more powerful state can in effect preemptively “win” the crisis.** As a consequence, **counterforce targeting capability is an enticing prospect for many despite its potential to compromise strategic stability. AI technologies could help enable new breakthroughs in tracking and targeting** and in antisubmarine warfare or make it easier for high-precision conventional munitions to destroy hardened ICBM silos (Holmes, 2016). **Such capabilities would be especially destabilizing because decisionmakers could threaten to employ conventional weapons much more plausibly than any kind of nuclear attack. A conventional threat would place the adversary under enormous pressure during a crisis, which could** force it to capitulate—but could also **spiral into nuclear war.** Such escalation could happen because **the adversary felt the need to use its weapons before being disarmed, in retaliation for an unsuccessful disarming strike, or simply because the crisis triggered accidental use.** Potential U.S. adversaries, such as Russia, take seriously the possibility that the United States might leverage its advantage in such technologies as AI to radically improve its counterforce capabilities. For the past several years, Russian military analysts have been engaged in a vociferous debate in the military press about the extent of their country’s strategic vulnerabilities.8 Their tendency to assume that current and future U.S capabilities pose a dire threat to Russia’s security stokes these anxieties.

#### Fourth is cyber – nuclear weapons are sitting ducks in cyberattacks – causes unmanageable escalation.

Futter '18 (Andrew Futter; Andrew Futter is an associate professor in the School of History, Politics, and International Relations at the University of Leicester. He is the author of The Politics of Nuclear Weapons and Ballistic Missile Defence and US National Security Policy, the editor of The United Kingdom and the Future of Nuclear Weapons, and co-editor of Reassessing the Revolution in Military Affairs; *Hacking the Bomb: Cyber Threats and Nuclear Weapons;* 2-15-2018; accessed 12-1-2019; JPark)

What, then, might this cyber-enabled conflict, or warfare involving cyber operations, look like? And how might these pressures involve thinking about nuclear weapons? The first thing to note is that even if nuclear systems are not targeted directly or are successfully guarded against malicious hackers, it seems very likely that the use—or even the threat of use—of cyber capabilities against an opponent during a crisis will raise tensions, concerns, and perceived vulnerabilities, and that this will make nuclear crisis resolution more complicated and perhaps more dangerous." The second thing to note is that the use of cyber capabilities is likely to obfuscate and complicate the escalation ladder, and possibly lead to an inadvertent deepening of a crisis, perhaps even up to the nuclear level. It is likely to do this in different ways from those theorized in the past, and probably at a much greater speed. It could also, for example, include attacks in both civilian and military domains. Taken together, new cyber dynamics—both operations and context might even necessitate a rethinking of these established nuclear concepts altogether. Perhaps the most important thing to note about cyber operations in future crises and warfare is that they are likely to be offense-dominant. That is, in cyberspace the advantage will be held by the attackers rather than the defenders. Although this forecast is challenged by some, and is contingent on several variables—particularly the target and intention of the attack—it does have rather significant implications for the broader security dilemma, and especially for strategic stability.51 Along with creating pressures for arms racing, this also makes cyber capabilities more likely to be employed early in a crisis, particularly given the policy of active defense mentioned above.52 The result could potentially be greater insecurity for all, and possibly unintended, and in the worst-case scenario perhaps even unmanageable escalation. By way of an example, an Israeli war game conducted in 2013 demonstrated how the use and threat of cyberattacks might very quickly escalate a crisis, in this case bringing the United States and Russia to the brink of conflict in a possible Middle East war.53 Such conflicts might begin and play out in a number of different ways, but all will likely create new pressures for crisis management. First, during a crisis hackers could potentially disrupt or destroy communications channels, making it difficult to manage forces, including nuclear forces, and reducing commanders' confidence in their weapons systems and the ability of officials to communicate. Even a relatively small-scale attack could create considerable doubt about the security and reliability of communications, and particularly about the veracity of the information flowing from their computers.54 Moreover, despite often-held beliefs to the contrary, many military communications systems—including even some used for nuclear command and control—utilize commercial infrastructure or are based on networks that could be vulnerable to an attack or disruption.55 It must therefore be assumed that the linkages required for nuclear second-strike capabilities could also be unreliable, and possibly vulnerable to an opponents cyber operations.56 Aggressors might also employ distributed denial-of-service attacks to prevent communication, of-service attacks to prevent communication, hamper battle management systems, magnify confusion, and make it more difficult to identify what is happening and perhaps to conduct a coordinated response. Such attacks might be particularly acute for nuclear dyads that are in close geographical proximity—and therefore face limited decision-making time—such as India and Pakistan." Second, the use of cyberattack capabilities might inadvertently escalate a crisis—very much building on the model of "inadvertent nuclear escalation" developed by Barry Posen back in the early 1990s.58 This might be due either to deliberate interference from a third-party actor—such as a terrorist group—or from an unauthorized insider, or by another state seeking to deepen the crisis through false flag operations (that is, operations conducted to look like they were carried out by someone else). Alternatively, it might involve accidentally targeting the wrong systems. This risk is amplified considerably in the cyber context because it is increasingly difficult to know which computer systems support which weapons and operations. For example, as Lawrence Cavaiola and his colleagues explain, "an attack [by the United States] on a Chinese system that is used to increase the readiness of tactical forces might also inadvertently degrade the readiness of Chinese strategic nuclear forces, with grave risks of misinterpretation and escalation, up to and including launch on warning."59 Thus, a cyberattack on computer systems thought to control conventional weapons might be mistaken (and interpreted) as a direct attack on an adversary's ability to use its nuclear forces. Moreover, even if enemy cyberattacks are detected and mitigated, this could still lead to a "spiral of mistrust" and worst-case scenario thinking.' Third, cyberattacks might reduce the ability to signal, causing flawed images of intentions and capabilities, or be used to "spoof early warning systems"—again, a particular concern given the possibility of false flag cyber interference by third parties. It is perfectly possible that the ability to clearly signal intentions could be one of the biggest challenges created by cyber operations for nuclear crisis management. The concern here is twofold. First, the cyber context will make communicating with an adversary (and your own forces) much more complicated. Second, it is far from clear that cyberattacks themselves offer a very useful way of signaling, and may in fact be worse than traditional methods. As Erik Gartzke and Jon Lindsay explain, this is because cyber operations "are complex, esoteric, and hard for commanders and policymakers to understand."6' Previous methods of signaling—such as seeking to indicate intentions or red lines to an adversary through limited conventional action, already a complicated and delicate endeavor—will probably be even more difficult to implement when cyberattacks are also involved.62 Moreover, given the difficulties of attribution—particularly when time is short, decision makers are under pressure, and third-party cyber activities abound—it may not be straightforward to ascertain when a conflict has actually stopped.63 In this way, cyber operations are likely to further complicate and "muddy" signaling between adversaries during a crisis or conflict, either deliberately or inadvertently." This would also, therefore, make the functioning of leadership far more complicated in any future nuclear crisis too. Fourth, the use of cyberattacks might reduce the search for viable alternatives, thereby compressing—or at least muddying —the escalation ladder, particularly the steps between conventional and nuclear use. Once hostilities begin, leaders may not feel confident that the information they are receiving is genuine; the same might also be true for commanders in the field. Each decision would be underpinned by an uneasiness about the veracity of the information and data being used, possibly leading to different types of calculations and actions.65 In addition to this, leaders would fear that cyber operations would be used early in a crisis to disable or retard their most important weapons systems and to prevent them from being used against an adversary. Unfortunately, this might create a spiral effect, and more pressure to "use them or lose them," when it comes to a state's most important military capabilities.66 In a worst-case scenario, these concerns might increase perceived time pressures to act or respond, and the option to act preemptively. Stephen Cimbala has even gone as far as to warn that a nuclear-armed state bombarded with cyberattacks—particularly on its command, control, communications, and early warning networks—might feel so vulnerable that it would opt for preemption, in the worst case with nuclear weapons.° This exacerbates the feeling that cyber operations could undermine the ability to threaten retaliation, and therefore to strike second, because cyber capabilities appear to augment conventional first-strike possibilities against key enemy systems and forces, including their nuclear weapons.68 Taken together, these dynamics raise the likelihood of unintended and potentially uncontrollable escalation and make the management of such crises more complicated and dangerous.69

### ---Nationalism

#### Nationalism causes deterrence failure by creating psychological bias.

Suzuki 19 Akisato Suzuki (the Max Weber Postdoctoral Fellow at the European University; a Research Fellow with the Institute for International Conflict Resolution and Reconstruction at Dublin City University; PhD, Dublin City University). “The nationalist interpretation of nuclear deterrence: evidence from the Kargil War.” International Politics. Volume 56, Issue 1, pp 70–86. February 2019. JDN. https://link.springer.com/article/10.1057/s41311-017-0117-x

In short, the implication of nuclear deterrence for rationalist theories of war is that if actors are rational, they should avoid war when both are nuclear-armed, because the expected utility of war would be lower than that of no war. This reasoning can be seen as the objectivist assessment of nuclear symmetry. I argue, however, that nationalist conflict can bias such an assessment. Nationalism, as a political ideology, advocates that a community distinctive in statehood, ethnicity, or both, should govern its own affairs (Gellner 2006; Smith 1991). Nationalism in itself is not a sufficient condition for conflict (e.g., Jones 2014; Csergo and Goldgeier 2004); it becomes so when the principle of national self-governance is threatened by an opponent (Gellner 2006, 1; Smith 1991, 78). In nationalist conflict, actors seek to achieve or maintain their national self-governance at the expense of the other’s, often by violent means.5 To achieve national self-governance, a challenger aims to revise the status quo, which would result in the (partial or complete) loss of national self-governance on a defender’s side; therefore, the defender must try to protect the status quo. For example, Kashmir has created just such a situation between India and Pakistan: Pakistan’s irredentist goal to govern Kashmir has been incompatible with India’s intention to retain the region as part of the national territory. In nationalist conflicts, actors do not perceive each other in an objective way; rather, the opponent looks ‘more threatening than it really is yet more easily defeated by united opposition than the true probabilities may warrant’ (Snyder 2000, 50). This is because nationalist conflict brings with it **psychological bias**, such as **false optimism**/chauvinism and **perception of threat** (Ganguly 2001; Kaufman 2001). These biasing effects influence both information asymmetry and commitment problems in ways that **cancel out** the stabilizing effect of **nuclear deterrence.** First, the effect of nuclear deterrence to reduce information asymmetry is nullified by the chauvinist bias that makes one believe a country is stronger than it actually is against an opponent. In general, nuclear deterrence should clarify that both states equally have the capacity to inflict a tremendous costs on the other and, therefore, escalation to war is too risky and irrational. This also suggests that, objectively speaking, nuclear states are in parity with respect to military strength. However, if nationalist conflict shapes a relationship between nuclear states, it means that the accompanying chauvinist bias makes both of these nuclear states falsely believe that one is stronger than the other. More specifically, they overestimate their own deterrence credibility and underestimate the opponent’s capacity and resolve to engage in war, in the shadow of nuclear symmetry. These biased estimates have different implications for challenger and defender states. A challenger will believe that the deterrent effect of its nuclear weapons makes it easy to act aggressively against the unresolved, incapable opponent, while a defender will expect that its deterrent effect prevents the unresolved, incapable opponent from translating its aggressive intentions into an actual military operation. Consequently, both challenger and defender will offer less to each other in bargaining than they should to satisfy the opponent in any negotiation, thereby **making it impossible to** reach a **compromise** and increasing the challenger’s motivation to resort to force. The irony is that, while the rationalist explanation of war attributes information asymmetry to an opponent’s incentive to misrepresent private information, nationalistically biased nuclear states create information asymmetry by themselves out of overconfidence. Second, the biasing effect of nationalist conflict to amplify threat perception also makes nuclear dyads insensitive to the positive implication of nuclear deterrence for commitment problems. In general, nuclear deterrence should make it difficult to renege on commitments and resort to war in the future, mitigating commitment problems and fostering a negotiation. However, the effect of nationalist conflict to make the opponent look more threatening than it actually is increases doubt that it will remain committed to a negotiated deal. Only from this point would it be possible to deduce that both nuclear challenger and nuclear defender would be equally likely to initiate war. Yet, as discussed above, nuclear states engaged in nationalist conflict also experience information asymmetry derived from the nationalist overconfidence of their nuclear strength. Hence, on the one hand, a challenger will falsely believe in its offensive advantage, estimating that it will be better to initiate war now rather than later lest the offensive advantage should disappear in the future. On the other hand, **the defender will be falsely optimistic about** its **defensive advantage** through nuclear deterrence, expecting that mere nuclear deterrence, without armed efforts, will be sufficient to protect the status quo from the threatening opponent. Consequently, the defender will prefer to spend resources on other purposes than on war efforts, which may ironically open up an opportunity to be taken advantage of by the challenger. To sum up, **war can occur between nuclear states** if they are engaged **in nationalist conflict**: (1) because the information asymmetry derived from nationalist overconfidence of nuclear strength will make it unlikely that these states will reach a compromise, and (2) because the commitment problem will motivate a challenger (rather than a defender) to initiate war. The psychological bias that nationalist conflict brings with it to actors cancels out the stabilizing effect of nuclear deterrence that should ameliorate information asymmetry and commitment problems.

#### Even if India and Pakistan are rational actors, conflict can still escalate.

Nixon 19 Ryan M. Nixon (PhD Candidate in International Studies, Old Dominion University; M.A., Old Dominion University).“The Messy Nuclear Landscape: Using Fuzzy Cognitive Mapping to Explore Plausible Nuclear Disarmament Scenarios.” PhD Dissertation. May 2019. JDN. https://digitalcommons.odu.edu/cgi/viewcontent.cgi?article=1113&context=gpis\_etds

A minor armed confrontation can **escalate to a larger war** because it signals that both sides are **risk accepting.**61 On the other hand, Kenneth Waltz argues nuclear weapons provide robust stability, writing that when two nuclear powers engage in conventional warfare, each side is likely to draw back and offer concessions out of fear of nuclear escalation.62 While the formal logic of this argument is sound, concession does not always offer the highest possible reward. Furthermore, **risk accepting behavior can escalate** a larger war **to nuclear brinkmanship,** particularly **given that one side has everything to lose** by conceding from the conflict. It is possible that a given conventional war is a zero sum war, where at least one side has intense resolve to achieve a specific goal, such as the overthrow of the existing regime. In such a case, if concessions do not increase the probability of survival, but rather bolster the other side’s goals, then the potentially willing side becomes unwilling to concede. If the losing side believes death is inevitable by conceding but has a small chance of survival by going nuclear, then using nuclear weapons is **the more rational move.** To illustrate this consider two states. State A and State B are fighting a conventional war. Both states have nuclear capabilities. State A’s unmovable goal is to eliminate State B. State B is losing the war. State B can concede, where death has a probability of 1, or it can launch a nuclear attack against State A, where death has a probability of less than 1. State B’s best option is to go nuclear, where the probability of survival is some number greater than zero.

### Impact – Nuke War

#### Even a limited nuclear war causes global famine and extinction.

Mills et al. 14 [Michael J. Mills – NCAR Earth System Laboratory, Owen B. Toon – Laboratory for Atmospheric and Space Physics and Department of Atmospheric and Oceanic Sciences at the University of Colorado Boulder, Julia Lee-Taylor – NCAR Earth System Laboratory, and Alan Robock – Department of Environmental Sciences at Rutgers State University of New Jersey "Multidecadal Global Cooling And Unprecedented Ozone Loss Following A Regional Nuclear Conflict" AGU Journals, 2-7-2014, https://agupubs.onlinelibrary.wiley.com/doi/10.1002/2013EF000205, DOA:12-1-2019 // WWBW]

Pierazzo et al. [2010] reviewed literature considering the effects of large and prolonged increases in UV‐B radiation, similar to those we calculate, on living organisms, including agriculture and marine ecosystems. General effects on terrestrial plants have been found to include reduced height, shoot mass, and foliage area [Caldwell et al., 2007]. Walbot [1999] found the DNA damage to maize crops from 33% ozone depletion to accumulate proportionally to exposure time, being passed to successive generations, and destabilizing genetic lines. Research indicates that UV‐B exposure may alter the susceptibility of plants to attack by insects, alter nutrient cycling in soils (including nitrogen fixation by cyanobacteria), and shift competitive balances among species [Caldwell et al., 1998; Solheim et al., 2002; Mpoloka, 2008]. The ozone depletion we calculate could also damage aquatic ecosystems, which supply more than 30% of the animal protein consumed by humans. Häder et al. [1995] estimate that 16% ozone depletion could reduce phytoplankton, the basis of the marine food chain, by 5%, resulting in a loss of 7 million tons of fish harvest per year. They also report that elevated UV levels damage the early developmental stages of fish, shrimp, crab, amphibians, and other animals. **The combined effects of elevated UV levels alone on terrestrial agriculture and marine ecosystems could put significant pressures on global food security. The ozone loss would persist for a decade at the same time that growing seasons would be reduced by killing frosts, and regional precipitation patterns would shift. The combination of years of killing frosts, reductions in needed precipitation, and prolonged enhancement of UV radiation, in addition to impacts on fisheries because of temperature and salinity changes, could exert significant pressures on food supplies across many regions of the globe.** As the January to May 2008 global rice crisis demonstrated, **even relatively small food price pressures can be amplified by political reactions, such as the fearful restrictions on food exports** implemented by India and Vietnam, followed by Egypt, Pakistan, and Brazil, **which produced severe shortages** in the Philippines, Africa, and Latin America [Slayton, 2009]. It is conceivable that the **global pressures on food supplies from a regional nuclear conflict could, directly or via ensuing panic, significantly degrade global food security or even produce a global nuclear famine.**

### ---Impact add-on

#### Independently, disease, fire, ecological damage causes massive amounts of suffering.

Edwards '17 (Paul N. Edwards; CISAC’s William J. Perry Fellow in International Security at the Freeman Spogli Institute for International Studies; 8-29-2017; "How nuclear war would affect the world climate and human health"; accessed 12-1-2019; JPark)

A U.S.-Russia war currently seems unlikely, but if it were to occur, hundreds or even thousands of nuclear weapons might be launched. The climatic consequences would be catastrophic: global average temperatures would drop as much as 12 degrees Fahrenheit (7 degrees Celsius) for up to several years — temperatures last seen during the great ice ages. Meanwhile, smoke and dust circulating in the stratosphere would darken the atmosphere enough to inhibit photosynthesis, causing disastrous crop failures, widespread famine and massive ecological disruption. The effect would be similar to that of the giant meteor believed to be responsible for the extinction of the dinosaurs. This time, we would be the dinosaurs. Many people are concerned about North Korea’s advancing missile capabilities. Is nuclear war likely in your opinion? At this writing, I think we are closer to a nuclear war than we have been since the early 1960s. In the North Korea case, both Kim Jong-un and President Trump are bullies inclined to escalate confrontations. President Trump lacks impulse control, and there are precious few checks on his ability to initiate a nuclear strike. We have to hope that our generals, both inside and outside the White House, can rein him in. North Korea would most certainly “lose” a nuclear war with the United States. But many millions would die, including hundreds of thousands of Americans currently living in South Korea and Japan (probable North Korean targets). Such vast damage would be wrought in Korea, Japan and Pacific island territories (such as Guam) that any “victory” wouldn’t deserve the name. Not only would that region be left with horrible suffering amongst the survivors; it would also immediately face famine and rampant disease. Radioactive fallout from such a war would spread around the world, including to the U.S. It has been more than 70 years since the last time a nuclear bomb was used in warfare. What would be the effects on the environment and on human health today? To my knowledge, most of the changes in nuclear weapons technology since the 1950s have focused on making them smaller and lighter, and making delivery systems more accurate, rather than on changing their effects on the environment or on human health. So-called “battlefield” weapons with lower explosive yields are part of some arsenals now — but it’s quite unlikely that any exchange between two nuclear powers would stay limited to these smaller, less destructive bombs. Larger bombs can flatten cities. Many if not most people within the blast radius — which can be up to 10 miles — would die instantly. Those who survived would wish they hadn’t, since most would die later of severe burns or awful cancers. Radioactive fallout from these weapons’ debris clouds would reach the stratosphere, where it would travel worldwide, potentially contaminating crops and livestock as well as causing radiation sickness and cancer directly. Later, this fallout would cause genetic mutations in plants, animals and human beings, as it has in the vicinity of the Chernobyl nuclear accident. Nuclear explosions would also cause immense fires. The smoke from burning buildings, oil and gas fields, refineries, chemical factories, and industrial facilities would be highly toxic. Forest fires would engulf large areas. These effects would destroy more property and kill more people.

### DA Preempts

#### Chemical and biological weapons can’t and won’t fill in – multiple factors.

Pitschmann 14 [Vladimír Pitschmann, (Faculty of Biomedical Engineering, Czech Technical University in Prague) "Overall View of Chemical and Biochemical Weapons" Toxins (Basel). 2014 Jun; 6(6): 1761–1784., https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4073128/, DOA:12-16-2019 // WWBW]

An important reason for most disarmament initiatives was also the attempts of big powers to cope with the progress of the enemy or to eliminate the lack of success in the development of the technology of a certain type of weapon. For example, in the 1960s, the **big powers concluded that biological weapons** (particularly pathogenic agents) **are not practicable for military purposes, since their effects are** quite **beyond** any **control**. The result of this was the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological/Biological and Toxin Weapons and on Their Destruction (Biological and Toxin Weapons Convention, BTWC), which was signed in Geneva in 1972 and came into force three years later. As a drawback of the Convention, there is, however, the lack of a control mechanism. One of reasons for this is that the principle of biological weapons and their military use have not yet been unambiguously delimited. There were no principal doubts about the perspective of chemical weapons in contrast to biological (especially bacteriological) weapons. In spite of this, at the dawn of the 1970s and 1980s, a number of problems were encountered. That time, the United States owned a rather outdated chemical arsenal accumulated in the course of the 1940s to 1950s (the Soviet Union had completed the chemical rearmament of nerve agents more than 10 years later). There was a possibility of solving this problem in two ways: by a complete rearmament based on the most recent scientific-technical knowledge or by completing the program for the development of binary ammunition. General rearmament is, however, enormously economically and technically tedious, and in addition, it also includes the destruction of outdated stocks. On the other hand, even the introduction of binary technology does not facilitate this task. The United States spent considerable funds for the binary program, but the volume of the binary ammunition produced finally accounted for only 2% of the total chemical arsenal. Under these conditions, it was more advantageous to promote the general prohibition of chemical weapons and their total destruction under an international supervision [1]. In this way, the big world powers, under the leadership of the United States and the Soviet Union (and its successor, Russia), gave up their chemical arsenals and considerably restricted the proliferation of chemical weapons and the danger of their use, even in developing countries. 3.3. Operation-Tactical Reasons for Adopting CWC Adopting the CWC was also supported by certain new views of the operational-tactical use. There were prevalent opinions that **chemical weapons could be replaced to the full extent by the most modern conventional weapon systems** (so-called intelligent weapons). Particularly **restricting factors were held against chemical weapons—the dependence on climatic conditions** (in spite of the fact that modern chemical formulae, ammunition and tools for attacking considerably reduced this dependence) **and also the difficulty of the activity of military troops in a contaminated field. The efficacy of chemical weapons also suffered from the introduction of an advanced system of technical and organizational provisions for** the **anti-chemical protection** of military troops and the population. However, from a solely military standpoint, chemical weapons are still the only actual available weapon system of mass destruction, which can be used for cases where a living force should be hit, but material objects should remain intact. On the other hand, there are a number of CWA that can cause the long-term contamination of the ground, equipment and technology or damage to sensitive materials. These negative impacts can result in requirements for subsequent decontamination.

#### Asteroids aren’t existential, squo methods solve, low probability and magnitude and best research proves nukes don’t solve and create more debris.

Resnick 19 (Brian Resnick, Senior Science Reporter- Brian Resnick is a science reporter at Vox.com, covering social and behavioral sciences, space, medicine, the environment, and anything that makes you think "whoa that's cool." Before Vox, he was a staff correspondent at National Journal where he wrote two cover stories for the (now defunct) weekly print magazine, and reported on breaking news and politics. 3-7-2019 19 What would it take to blow up an asteroid? The force of 10 million atomic bombs. Vox https://www.vox.com/science-and-health/2019/3/7/18251559/asteroid-blow-up-how-to, DOA 12-12-2019) arnavvs

This is the asteroid Eros. It has a diameter of around 16.8 kilometers and would be very, very hard to destroy. NASA/JPL If you were a moviegoer in the late ’90s, I wouldn’t blame you for thinking the best way to deal with an apocalyptic-size asteroid hurtling toward Earth is to blow it to smithereens. After all, that’s how Bruce Willis saved the world in Armageddon. Saving the planet ought to be as easy as the press of a thermonuclear button, right? Not so fast. For one, experts in planetary protection (a real thing) say it would be a lot simpler to just push a deadly incoming asteroid into a safer orbit. This is a real consideration because NASA is keeping its eye on about 2,000 ”potentially hazardous” objects that come within 4,647,790 miles of Earth and are large enough to cause damage. But also there’s this: New research suggests it’s really, really difficult to pulverize an asteroid. How hard can it be to destroy a 10-kilometer-wide asteroid? Kaliat Ramesh is a professor of mechanical engineering and material science at Johns Hopkins University. And recently, he and colleagues published a paper in the planetary science journal Icarus that basically asked the question: What would it take to break up an asteroid? The answer to that question matters — but not so much for what it means for the future of life on Earth. Instead, it helps us better understand what asteroids look like, and how they evolve over time as asteroids collide with one another. First off, there’s no way to do this sort of exercise without making some assumptions. While we know that asteroids are mainly made up of iron and rock, we have limited data on their surface and interior composition. Any rock’s vulnerability to destruction is highly dependent on how many cracks, pores, and other such deformities exist on its surface. But Ramesh and his colleagues were able to take the results of experiments on Earth — experiments involving very high-speed cameras studying how rocks here on Earth fissure and crack when hit with a projectile — and extrapolate them up, accounting for the low-gravity environment of the space around an asteroid. If you die via asteroid, this is how it will happen Smashed, fissuring rocks are a complicated thing to model in a computer. When cracks form on the surface, “you suddenly you get this collective behavior of cracks all trying to [move] really fast, all of them interacting with each other,” Ramesh says. How quickly those numerous cracks spread and form helps determine the resiliency of the rock. So it’s a massively complicated process to predict how a collision will change or deform a rock in space. These limitations aside, Ramesh and his colleagues determined that, well, it’s going to be very hard to destroy an asteroid — near impossible. Even if there is an asteroid hurtling toward Earth, it wouldn’t make a lot of sense to launch the world’s entire nuclear arsenal at it in the hopes of blowing it up. “We would estimate that it would take energy equivalent to about 200 gigatons of TNT to fully disrupt an asteroid with a 20-kilometer diameter,” Ramesh says. (This is roughly double the estimated size of the asteroid or comet that is believed to have killed the dinosaurs. But there is some evidence that Earth has been struck by a massive 20-kilometer asteroid in the past.) 200 gigatons of TNT (dynamite) contains roughly the energy equivalent of about 10 million Hiroshima-size bombs. It’s also about 10 times more energy than previous estimates of what it would take to destroy an asteroid of this size. (This new estimate takes into account the complex interactions between small cracks that form on the asteroid’s surface upon impact, which actually make for a more impact-resistant object.) The most powerful bomb in human creation had an explosive yield of 50 megatons. You’d need the power of 4,000 of those to annihilate a 20-kilometer-wide asteroid. But even then, you couldn’t just launch 4,000 nuclear weapons to destroy the asteroid. That energy would need to be delivered with a particular momentum (that is, motion confined to a particular mass). Which is to say: you’d probably need to confine the force of 4,000 of the most powerful nuclear bombs into a projectile. This research really isn’t about destroying asteroids. It’s about what to expect when we visit them. The tremendous amount of energy needed is why we wouldn’t want to blow up an asteroid to save Earth. But Ramesh stresses that his research isn’t exactly about finding out how to destroy an asteroid on a collision course with Earth. He’s well aware it would be a lot easier just to push an asteroid out of the way. (Which is something NASA has some preliminary plans for.) In the paper, Ramesh and his colleagues weren’t modeling what a nuclear explosion would do to an asteroid. No, they were modeling something that happens naturally: What happens when one smaller asteroid slams into a larger one, as has happened continually over the life span of the solar system? The answer to that question helps us understand what asteroids might look like if we were to explore more of them, and anticipate what might happen if we wanted to mine them (possibly with the use of explosives). Asteroids are rich sources of metals, minerals, and even water. They may one day provide the raw ingredients to refuel spaceships without the need to return to Earth. Eventually, “humans and robots are going to go to an asteroid, and we want some sense of what we’re going to see when we get there,” Ramesh says. Some robots already have. NASA’s OSIRIS-REx is currently orbiting the asteroid 101955 Bennu, with the eventual goal of collecting material from its surface and returning it to Earth in 2023 (a similar Japanese mission brought asteroid dust back to Earth in 2010). NASA’s Dawn spacecraft flew by the dwarf planets (which also can be thought of as very large asteroids) Ceres and Vesta in 2012 and 2015, respectively. NASA has laid the groundwork for an eventual “asteroid redirect” mission. The plan: A robot spacecraft will land on an asteroid, grab a boulder, and bring it into orbit around the moon. Asteroids — like the ones humans might want to explore or mine one day for raw materials — have been subjected to such collisions over the life of the solar system. By imagining how asteroids collide and are destroyed (or not), we can better understand their composition and surface features, and how they evolve over time as more collisions take place. “We wanted to predict what we’d find on a surface of an asteroid if we’d go visit one,” Ramesh says. When a large asteroid is pummeled by a smaller one, gravity keeps much of it together One fascinating thing that happens when an asteroid is hit but is not destroyed is that much of the rubble that flies off after the collision is eventually pulled back toward the intact core of the asteroid via gravity. We could very well find asteroids that have this rubble loosely attached at the surface (and are therefore easy to mine). Here’s an animation of this recollection process generated by the researchers’ model. Charles El Mir/Johns Hopkins University These calculations also help us understand that if we were to destroy at least part of an asteroid, we could also be creating more hazardous objects. The good news is that asteroids that pose an existential threat to life on Earth only strike once every 500,000 years or more. Even the 140-meter-wide asteroids that could destroy cities and regions hit once every 10,000 years. And the risk of even being injured from a 20-meter object — like the one that exploded over Chelyabinsk, Russia, in 2013 and hurt nearly 1,500 people — is tiny. So instead of being worried about asteroids killing us, we should look at them in wonder. Asteroids are fascinating because they represent the leftover building blocks of the planets in our solar system. “You have all these [asteroid] bodies that have been around for a few billion years,” Ramesh says. “For us to understand the processes that drive these things over time, that is tied into the history of where we come from, and it’s also tied into our future, when we get out into the solar system and try to use them.”

#### Nuclear power prevents transition to renewables – reinforces warming.

Johnson 19 [Jeff Johnson, () "Can nuclear power help save us from climate change?" Chemical &amp; Engineering News, 9-23-2019, https://cen.acs.org/energy/nuclear-power/nuclear-power-help-save-us/97/i37, DOA:1-29-2020 // WWBW]

But **steep barriers to a nuclear energy renaissance exist**, among them **aging reactors, high costs to build new ones, safety concerns, and questions about how much nuclear is needed** in the world’s energy mix. Historically, nuclear power has played its biggest role in advanced economies, where it makes up 18% of total electricity generation today. France is the most dependent on nuclear energy, with 70% of its electricity generated from nuclear reactors. By number of operating reactors, the US leads with 98 power plants capable of generating 105 GW; France is second with 58 reactors generating 66 GW of electricity. However, many of those reactors are old. **In the US, the European Union, and Russia, plants average 35 years or more in age, nearing their designed lifetimes of 40 years. Building new nuclear power plants based on traditional designs will be nearly impossible in developed economies**, IEA analysts say. The challenges include **high costs and long construction times, as well as time needed to recoup costs once plants start running,** plus ongoing issues with radioactive waste disposal. In addition, the competitive electricity marketplace in the US makes it hard to sell nuclear energy against that generated more cheaply through natural gas, wind, or solar. Right now, only 11 nuclear plants are under construction in developed economies—4 in South Korea and 1 each in seven other countries. There is more potential for nuclear energy expansion in developing nations with state-controlled, centralized economies. China is the world’s third-largest nuclear generator, with 45 reactors capable of producing 46 GW of electricity. China also has the biggest plans for new power plants, with 11 at various stages of construction, the IEA says. India is building 7; Russia, 6; and the United Arab Emirates, 4, with a sprinkling of other new plants coming throughout the rest of the world. All will be state owned, the IEA says. The nuclear industry’s main hope for future expansion lies in a new generation of small, modular reactors that generate less than 300 MW each and are amenable to assembly-line construction. These are still under development, however, with none licensed or under construction. A middle path between new plants and no plants is lifetime extensions for existing reactors. The IEA estimates the costs for maintenance and improvements needed to continue operating an existing nuclear reactor for an additional 10–20 years would be $500 million–$1.1 billion per gigawatt, an amount the IEA says is comparable to constructing a renewable—solar or wind—system of the same size. The result would be effectively 1 GW of new, low-carbon electricity without the delays involved in siting and building a new solar field or wind farm. In the US, the Nuclear Regulatory Commission (NRC) has already renewed and extended the operating licenses from 40 to 60 years for 90 of the 98 operating reactors. The industry is now focusing on renewals to operate for up to 80 years. Similarly, other countries are considering extending existing reactor operations but for shorter periods, the IEA reports. These extensions present what the Union of Concerned Scientists (UCS) terms a “nuclear power dilemma.” The nonprofit organization, which advocates scientific solutions to global problems, has been a frequent nuclear industry critic. “We are very cognizant of this climate challenge and the need to act quickly to cut greenhouse gas emissions,” says Rachel Cleetus, the UCS’s climate and energy policy director. The UCS’s solution for providing energy in a warming world is to tax and cap carbon dioxide emissions and introduce a low-carbon electricity standard for all energy sources. Such measures would drive the construction and development of low-carbon energy facilities and technologies, the UCS says. For nuclear energy in particular, the organization endorses temporary financial support for the extension of some plants, conditioned on rate protection for consumers, safety requirements, and greater investments in renewables and energy efficiency. “We can’t just give them lots of money and blanket life extensions,” Cleetus says. **Scenarios and mathematical models** run by the UCS **show nuclear is very unlikely to grow beyond providing at most 16% of the world’s electricity generation capacity by 2050 even with aid, far short of the 85% or more of the** low- or noncarbon **generation needed to address global warming.** Underlying the debates about power plant costs and operating lifetimes are questions of safety and risks—real and perceived—of nuclear reactors and radioactivity. These concerns have made nuclear power unpopular in the US, Germany, Japan, and elsewhere. The San Onofre Nuclear Generating Station (SONGS), resting on the US West Coast north of San Diego, provides an example of why. Seven million people live within 80 km of the plant. A stormy relationship between SONGS and its surrounding community goes back decades. Most recently, the facility was completely shut down in 2013 after two nearly new steam generators failed. The replacements were part of a $670 million overhaul that was supposed to provide 20 more years of life for the plant. Then, while transferring used fuel into a storage vault last year, contractor Holtec International mishandled and nearly dropped a 50-metric-ton spent fuel canister. The NRC subsequently cited plant owner Southern California Edison for failing to properly report the incident, as well as conditions that led to it. The public learned about the slipup from a whistle-blower speaking at a community meeting. The event halted fuel transfer operations, which are just now restarting. “Repairs and replacements could be done properly at nuclear plants,” says L. R. “Len” Hering Sr., a retired rear admiral of the US Navy who lives near SONGS and is cochair of a task force established by Rep. Mike Levin (D-CA) to address community safety concerns at the facility. Hering bases that assessment on his navy experience. “Ships are designed to last roughly 30 years, and when the navy goes through a process of life extension, we do extensive testing and evaluation,” he says. “We make certain all components are up to snuff. In the navy, repairs are made by a focused group of individuals separate from the ship’s operators, and it is not about cost.” He has not seen a similar level of attention and rigor at SONGS. Once a nuclear advocate, he has cooled on nuclear power because of concerns over management and regulation. “I don’t believe the NRC has the capacity to properly inspect and oversee operations or maintenance,” he says. Meanwhile, some of the groups advocating for strong action to address climate change question whether more nuclear energy is necessary. Over the past 20 years, **as nuclear power generation has declined, renewable sources have expanded by some 580 GW—more than the output of all the world’s nuclear power plants**—to make up the difference. Consequently, the overall share of low-carbon electricity sources—hydropower, nuclear, solar, and wind—has stayed even at about 36%. The IEA applauds the growth of renewables but says that it is unprecedented and not sustainable. Hence the agency’s support for nuclear power. However, energy researchers at the World Resources Institute and the UCS, speaking at a recent US congressional hearing, say **renewable sources will continue to expand, and major increases in energy efficiency are on the horizon. In addition, the researchers expect that as more renewable energy facilities come on line, new technologies will be developed to address the challenge of variable output from renewable energy sources**, such as with solar on an overcast day. **Overreliance on nuclear might in fact stall development and installation of technologies needed for a transition to a low-carbon future**, Cleetus argues. Her modeling shows that **capital investment needed for renewable energy development**—building high-voltage power lines, advanced batteries and other storage systems, and of course, renewable resources themselves—**could be funneled off to build and retrofit more nuclear power plants.** And then there are those who question **whether nuclear energy can even be called low carbon if** greenhouse gas **emissions are considered for the full energy cycle, including** **plant construction, uranium mining and enrichment, fuel processing, plant decommissioning, and radioactive waste deposition.**

## Framing – LD

### FW

omitted

## Framing – Policy

### TL – Education

omitted

### Extinction First

omitted

### Institutions Good

omitted

## Underview

### U/V – Theory

omitted

# 1AR – Case

## Ext – Advantage

### ! – Nuke War

#### Nuclear war causes extinction---that’s 1AC Mills---initial blast, tons of carbon smoke, ozone losses and nuclear winter causes disease and famine.

### Extinction First

#### omitted

### Whole Res – Miscalc

#### Extend Patrick and Evanoff – yes miscalc:

#### First is history – historical near misses prove that accidental launch will happen – it’s only a matter of time

#### Second is prolif – emerging nuclear powers like Pakistan and North Korea have limited nuclear safeguards that guarantee escalation

### Whole Res – Ambiguity

#### Extend Gower – conventional war escalates – misinformation, cyber, dual-threat weapons and fear means that leaders can’t make rational decisions in a crisis – creates a use it or lose it situation where they have to launch nukes

### Whole Res – AI

#### Extend Geist and Lohn – policymakers are afraid of AI counterforce that could disable their nuclear capability – that forces them to first strike to maintain their deterrent.

### Whole Res – Cyber

#### Extend Futter---hackers wreck command and control infrastructure confusing a country into accidental launch. It’s probable---Russia’s already suffered millions.

### US/Russia – Religion

### Indo-Pak – Counterforce

#### India is developing counterforce nuclear capabilities now so they can strike first and take out Pakistan’s nuclear weapons. That creates first strike instability – both countries are incentivizes to strike first because if they strike second they won’t have weapons to strike with.

#### Case o/w on time frame – indo-pak tensions or high now and on the brink of explosion – recent Kashmir conflict proves

### Deterrence Fails – Barash

#### Omitted

## Ext – Method

### Foradori

#### Omitted

## F/L – Defense

### TL – Durable Fiat

Aff gets durable fiat – takes out ­­­­\_\_\_\_ - a] clash and strat skew – otherwise the neg would win every debate on presumption which kills aff strat since every advantage would be reversed b] text – the res says “ought”, not “will”, means the aff’s only burden is to prove it would be better if states eliminated their nukes

### AT Circumvention

1] durable fiat solves

2] even if some nukes still exist, fewer is better – more nukes increase the chance of accidental war

### Cyber – AT Air Gapping

Omitted

## F/L – CT

### AT Dumping

omitted

### AT Rearm

1] durable fiat

2] fewer nukes better

3] counterforce solves

See at prolif for more

## F/L – AT Spark

### AT No Nuke Winter

omitted

### AT Rainout

omitted

#### omitted

### AT Mindset Shift

#### omitted

# 1AR – T/Theory

## Paradigm Issues

### 1AR---Reasonability

omitted

### 2AR---Reasonability

#### omitted

## F/L – AT Theory

### AT Spec [Policy]

#### omitted

### 1AR---AT Black Framework

#### omitted

### 1AR---AT Body Politics

omitted

### 1AR---AT Slave Contingency

omitted

# 1AR – LARP

## 1AR – AT PICs

### Theory

omitted

### Perm – AT Country PIC

#### Perm do the CP – generics can’t be negated with exceptions – dogs have 4 legs isn’t negated by proving one dog has 3 legs.

Nebel 19 Jake Nebel, 8-12-2019, "Genericity on the Standardized Tests Resolution," Briefly, https://www.vbriefly.com/2019/08/12/genericity-on-the-standardized-tests-resolution/?fbclid=IwAR0fRUmyVJMF-JjwDQ4Fufx8T3zQTUBKRufUtNDvU\_0R5PS7fM2CkmS3i24 SJBE. LHPMC Jake Nebel is an assistant professor of philosophy at the University of Southern California and executive director of Victory Briefs.

First, on this topic, **the affirmative should have to argue that, in the United States, colleges and universities ought not consider standardized tests in undergraduate admissions decisions. This is the topicality rule**. Second, even if some particular colleges and universities ought not consider particular tests in particular decisions, that doesn’t mean that colleges and universities ought not consider standardized tests in undergraduate admissions decisions. Therefore, **showing that some particular colleges and universities ought not consider particular tests in particular decisions fails to meet the affirmative burden**. This two-premise argument strikes me as eminently reasonable, and I don’t think it should require much more explanation in order to win a debate. But many debaters and judges appear to think that the argument is not just unsound but obviously or embarrassingly so. This response puzzles me, given the intuitive plausibility of the premises. Many of those who reject the argument are reluctant to identify which premise of the argument they reject, and they should have to do that in order to reject the conclusion. But, once again, I will try to defend the premises of the argument in the context of the new topic. Let’s start with the second premise. 1 Bare Plurals “Colleges and universities,” “standardized tests,” and “undergraduate admissions decisions” are bare plural noun phrases. A bare plural is a noun phrase that lacks an overt determiner. Determiners include articles like the, possessives like my, demonstratives like these, and quantifiers like some. “**Colleges and universities,” “standardized tests,” and “undergraduate admissions decisions” are plural, and they lack determiners, so they are bare plurals**. (“Colleges” and “universities” are also bare plurals, but it doesn’t matter for our purposes whether we consider them separately or just consider the conjunctive noun phrase.) **Bare plurals are typically used to express generic generalizations.** Generic generalizations include sentences like, “Dogs bark,” “Bees sting,” and “Birds fly.” It is helpful to understand generic generalizations by contrasting them with two other kinds of generalizations. Existential statements say that there exist some things that satisfy a certain property. For example, “Some bees don’t sting” is an existential statement. It is true because there are indeed some bees that don’t sting. Existential statements can be affirmed by pointing to particular examples—e.g., mason bees. Universal statements say that all things satisfy a certain property. For example, “All bees sting” is a universal statement. It is false because, as we just saw, some bees don’t sting—so it’s not the case that all of them do. Universal statements cannot be affirmed by pointing to particular examples, but they can be negated by pointing to particular counterexamples—again, e.g., mason bees. Generic generalizations are neither existential nor universal. Generics are distinct from existential statements because they cannot be affirmed by particular instances. For example, “Birds swim” is a generic. It’s false even though there are some birds that do swim: namely, penguins. You can’t affirm that birds swim by observing that penguins swim. Generics are distinct from universal statements because they can tolerate exceptions. **For example, “Birds fly” is a generic. It’s true even though there are some birds that don’t fly: namely, penguins. You can’t negate that birds fly by observing that penguins don’t. Both distinctions are important. Generic resolutions can’t be affirmed by specifying particular instances.** But, **since generics tolerate exceptions, plan-inclusive counterplans (PICs) do not negate generic resolutions**. Bare plurals are typically used to express generic generalizations. But there are two important things to keep in mind. First, generic generalizations are also often expressed via other means (e.g., definite singulars, indefinite singulars, and bare singulars). Second, and more importantly for present purposes, bare plurals can also be used to express existential generalizations. For example, “Birds are singing outside my window” is true just in case there are some birds singing outside my window; it doesn’t require birds in general to be singing outside my window. So, what about “colleges and universities,” “standardized tests,” and “undergraduate admissions decisions”? Are they generic or existential bare plurals? On other topics I have taken great pains to point out that their bare plurals are generic—because, well, they are. On this topic, though, I think the answer is a bit more nuanced. Let’s see why.

### Perm – AT Non-Military PIC

#### Perm do the CP

#### A] the aff clarified arsenal is a collection of weapons – that’s in the 1AC doc – a weapon is for combat use

Dictionary.com https://www.dictionary.com/browse/weapon

any instrument or **device for use** in attack or defense in **combat, fighting, or war**, as a sword, rifle, or cannon.

#### B] eliminate doesn’t mean all

Wisconsin Employment Relations Commission Arbitrator 11

page9image3570031248(Arbitration LOCAL 2492 - MARATHON COUNTY ADMINISTRATIVE, TECHNICAL AND PROFESSIONAL EMPLOYEES UNION, AFSCME, AFL-CIO WISCONSIN COUNCIL 40 AND MARATHON COUNTY Case 334 No. 70449 MA-14966)

“The trigger for layoff is not by a complete elimination of the position.” Article 6(B) contains no reference to the layoff triggering mechanism being related to the elimination of a position. “It simply states ‘whose position is being eliminated.”’ This language is not clear and when a contract term is ambiguous the law favors an interpretation which would avoid a harsh, absurd or nonsensical result. The Union argues that, in the face of this ambiguous language, the Arbitrator should interpret the term “eliminated” to mean “that when a position is so drastically changed from full-time to part-time status that it connotes an elimination of that position within the meaning of the contract.” The fact that the parties negotiated a meet and confer provision in the CBA (Article 6(B) - Reduction in Work Hours). Because of this, it is apparent that the parties were aware of the lack of clarity of the word “eliminated” and negotiated the meet and confer language to cover the event of a reduction in an employee’s work hours.

### Perm – AT Weapon PIC

#### Perm do the cp: eliminate doesn’t mean all

Wisconsin Employment Relations Commission Arbitrator 11

page9image3570031248(Arbitration LOCAL 2492 - MARATHON COUNTY ADMINISTRATIVE, TECHNICAL AND PROFESSIONAL EMPLOYEES UNION, AFSCME, AFL-CIO WISCONSIN COUNCIL 40 AND MARATHON COUNTY Case 334 No. 70449 MA-14966)

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### Perm – Textual Competition

#### omitted

### AT Country PICs

omitted

### AT First Strike CP

omitted

### AT Asteroids PIC

omitted

#### 5] Asteroids rebuild---can’t solve

Andrews ‘19 [Robin George Andrews, () "If We Blow Up an Asteroid, It Might Put Itself Back Together" The New York Times, 3-8-2019, https://www.nytimes.com/2019/03/08/science/asteroids-nuclear-weapons.html, DOA:12-2-2019 // WWBW]

Using computer models, scientists simulated a 4,000-foot asteroid smashing into a 15.5-mile asteroid at 11,200 miles per hour. Immediately after colliding, the large asteroid cracked considerably, with debris flowing outward like a cascade of Ping-Pong balls. Despite some deep fractures, the heart of the asteroid was not comprehensively damaged. As time went on, the **gravitational pull** of the asteroid’s resilient core was able to pull back **ejected shards**. It seems that asteroids don’t just absorb **mind-boggling** amounts of damage, but, as previous work has hinted, they also are able to **rebuild** themselves. Charles El Mir, who studies asteroid annihilation at Johns Hopkins University and is the paper’s lead author, said his findings “could be interpreted as an argument **against ‘blowing up’** an asteroid as a defensive strategy.” Asteroid collisions and demolitions have been simulated many times in recent decades. Earlier studies suggested that large asteroids are full of internal scars because of their violent history, and that a fast enough impact would completely shatter them. The new study, published this month in the journal Icarus, tried a different simulation. K.T. Ramesh, director of the Hopkins Extreme Materials Institute, said that Andy Tonge, a former graduate student, had developed a computational model that looked at how materials like bulletproof vests respond to impacts. Realizing that Dr. Tonge’s model could simulate asteroid impact events, the team merged it with another model that also replicated the effects of a large asteroid’s gravitational field. This hybrid model allowed them to **more realistically** see how an asteroid responds to being hit by a powerful projectile. It captured previously missing but vital small-scale details, including where fractures would appear and precisely how they would spread. Michele Bannister, a planetary astronomer at Queen’s University Belfast, described the research as “a **nice upgrade** on modeling the complex physical realities” of the solar system’s enigmatic rocky monsters. The study has limitations. Both asteroids are modeled as simple, nonrotating chunks of rock, whereas real asteroids are far more variable. In addition, the larger asteroid, despite featuring a starting collection of cracks, did not have a history of multiple impacts as true asteroids would. A large space rock smashing into a humongous space rock also differs from a missile onslaught, or an atomic bomb exploding on or beneath an asteroid’s surface while a popular rock band plays. The study doesn’t rule out using projectiles to destroy an incoming asteroid, Dr. El Mir said. But, he added, shattering a large asteroid may end up causing more problems than it solves. Turning a **cannonball** into **shotgun-shell** fragments could still result in Armageddon if the shards **strike Earth**.

#### Asteroid fragments are worse than complete asteroids---they increase the likelihood that at least one will hit earth.

### AT Virtual Arsenals CP

omitted

## 1AR – AT Consult CPs

### Theory

#### omitted

### Perm

omitted

### AT Consult ICJ

omitted

## 1AR – AT Adv CPs

### AT Hotlines CP

omitted

## ---AT Indopak Adv CPs

### AT Indopak NFU CP

omitted

### AT Indopak Treaty CP

**omitted**

## 1AR – AT DAs

### AT Conventional War DA

omitted

### AT CBW DA

The bioweapon specific cards are better – read those if you can.

#### Chemical and biological weapons can’t and won’t fill in – multiple factors.

Pitschmann 14 [Vladimír Pitschmann, (Faculty of Biomedical Engineering, Czech Technical University in Prague) "Overall View of Chemical and Biochemical Weapons" Toxins (Basel). 2014 Jun; 6(6): 1761–1784., https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4073128/, DOA:12-16-2019 // WWBW]

An important reason for most disarmament initiatives was also the attempts of big powers to cope with the progress of the enemy or to eliminate the lack of success in the development of the technology of a certain type of weapon. For example, in the 1960s, the **big powers concluded that biological weapons** (particularly pathogenic agents) **are not practicable for military purposes, since their effects are** quite **beyond** any **control**. The result of this was the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological/Biological and Toxin Weapons and on Their Destruction (Biological and Toxin Weapons Convention, BTWC), which was signed in Geneva in 1972 and came into force three years later. As a drawback of the Convention, there is, however, the lack of a control mechanism. One of reasons for this is that the principle of biological weapons and their military use have not yet been unambiguously delimited. There were no principal doubts about the perspective of chemical weapons in contrast to biological (especially bacteriological) weapons. In spite of this, at the dawn of the 1970s and 1980s, a number of problems were encountered. That time, the United States owned a rather outdated chemical arsenal accumulated in the course of the 1940s to 1950s (the Soviet Union had completed the chemical rearmament of nerve agents more than 10 years later). There was a possibility of solving this problem in two ways: by a complete rearmament based on the most recent scientific-technical knowledge or by completing the program for the development of binary ammunition. General rearmament is, however, enormously economically and technically tedious, and in addition, it also includes the destruction of outdated stocks. On the other hand, even the introduction of binary technology does not facilitate this task. The United States spent considerable funds for the binary program, but the volume of the binary ammunition produced finally accounted for only 2% of the total chemical arsenal. Under these conditions, it was more advantageous to promote the general prohibition of chemical weapons and their total destruction under an international supervision [1]. In this way, the big world powers, under the leadership of the United States and the Soviet Union (and its successor, Russia), gave up their chemical arsenals and considerably restricted the proliferation of chemical weapons and the danger of their use, even in developing countries. 3.3. Operation-Tactical Reasons for Adopting CWC Adopting the CWC was also supported by certain new views of the operational-tactical use. There were prevalent opinions that **chemical weapons could be replaced to the full extent by the most modern conventional weapon systems** (so-called intelligent weapons). Particularly **restricting factors were held against chemical weapons—the dependence on climatic conditions** (in spite of the fact that modern chemical formulae, ammunition and tools for attacking considerably reduced this dependence) **and also the difficulty of the activity of military troops in a contaminated field. The efficacy of chemical weapons also suffered from the introduction of an advanced system of technical and organizational provisions for** the **anti-chemical protection** of military troops and the population. However, from a solely military standpoint, chemical weapons are still the only actual available weapon system of mass destruction, which can be used for cases where a living force should be hit, but material objects should remain intact. On the other hand, there are a number of CWA that can cause the long-term contamination of the ground, equipment and technology or damage to sensitive materials. These negative impacts can result in requirements for subsequent decontamination.

### ---AT Bioweapons

omitted

#### Bioweapons don’t work as a deterrent – even if states develop bioweapons, it doesn’t spark escalation.

Koblentz 15 [Gregory D. Koblentz, (Gregory D. Koblentz is an associate professor and deputy director of the Biodefense Graduate Program in the School of Policy, Government, and International Affairs at George Mason University. He is the author Living Weapons: Biological Warfare and International Security (Cornell University Press, 2009)) "The myth of biological weapons as the poor man’s atomic bomb" Bulletin of the Atomic Scientists, 3-18-2015, https://thebulletin.org/roundtable\_entry/the-myth-of-biological-weapons-as-the-poor-mans-atomic-bomb/, DOA:1-22-2020 // WWBW]

The first significant difference involves the level of uncertainty associated with the employment of these weapons. Nuclear weapons deliver instantaneous, overwhelming, and predictable levels of destruction. The effects of biological weapons, on the other hand, are delayed, variable, and difficult to predict due to their sensitivity to environmental conditions and the importance of pathogen-host interactions. In addition, the **lack of operational experience with these weapons and the inability to simulate realistically their effects** (short of massive human experimentation) **impedes** the ability of **states** to substantially reduce this level of uncertainty. The second major difference between nuclear and biological weapons concerns the availability of defenses. There are no effective defenses against the effects of a nuclear attack. **There are**, however, **a number of countermeasures that can be taken** before, **during**, and after **a biological attack that can mitigate the consequences** of such an attack. **Masks and filters** can prevent exposure to biological agents. Biological weapons are also unique in that **vaccines** can be used to protect soldiers and civilians before an actual attack occurs. Because diseases have an incubation period of days to weeks, defenders have a window of opportunity to detect an attack using sensors and biosurveillance systems. Early detection can trigger the distribution of **medical countermeasures** to treat the victims of an attack and there are already vaccines and /or treatments available for the most lethal diseases such as anthrax, plague, smallpox, and tularemia. As a result, the **effects of a biological attack** are not absolute and incontestable; they **can be mitigated and limited by a well-prepared defender.** This possibility is likely to reduce the confidence of states in their ability to reliably inflict unacceptable damage against an adversary in a retaliatory strike. The full panoply of defenses need not be deployed constantly at full readiness because the very **availability of these defenses may be sufficient to dissuade a state from calculating that it can inflict unacceptable damage.** Although civilian populations will remain more vulnerable to biological weapons than will military forces, damage limitation remains a viable option for larger, more advanced states facing less sophisticated adversaries. Third, biological weapons have limited value as strategic deterrents due to the need for states to shroud their biological weapons programs in strict secrecy. This need for secrecy is driven by normative, legal, and strategic considerations. In the strategic context, **the availability of defenses against biological weapons places a premium on the attacker achieving surprise. This undermines the ability of a state to use biological weapons as a deterrent** in two ways. First, **the secrecy required to retain the element of surprise in a biological attack reduces a state’s ability to issue credible threats** to inflict unacceptable damage against an adversary. To make a deterrent threat credible, **a state would** not only **have to admit that it was violating international** norms and **laws** but it would **also** have to **reveal details about its offensive biological warfare capabilities** such as the types of agents it has developed and their means of delivery. These **revelations could reduce the effectiveness of these weapons by allowing the defender to mobilize appropriate countermeasures.** In contrast, the superpowers flaunted their nuclear forces during the Cold War for deterrent purposes. They were able to do this because these demonstrations of their nuclear capabilities did not provide the other side with an improved means of defending against them. **Second, secrecy is a flimsy means of protecting strategic forces designed for deterrence. Strategic forces that depend on secrecy for their protection are vulnerable to intelligence breakthroughs** by an adversary. If a defender gained inside information about an attacker’s capabilities, it would be possible to develop and stockpile new pharmaceuticals, immunize the at-risk population, distribute protective masks and treatments, enhance public health surveillance, and take other precautions that could substantially mitigate the impact of a first-strike or retaliatory attack with biological weapons. Although such information is difficult to acquire, the cases of Soviet biologist Vladimir Pasechnik, former Soviet bioweapons program official Ken Alibek, and Iraqi weapons official Hussein Kamal attest to the risk posed by the defection of high-level government officials knowledgeable about their nation’s biological warfare programs. A careful analysis of the technical and strategic aspects of biological weapons reveals that while biological weapons have the potential to inflict unacceptable damage against an adversary, they are unable to offer states an “assured” capability for doing so. This shortfall significantly undermines the suitability of biological weapons to serve as a strategic deterrent. Whatever the merits may be of pursuing “winter-safe deterrence,” **promoting the discredited concept of biological weapons as a “poor man’s atomic bomb” is not an analytically defensible means of achieving that objective.**

### AT Deterrence DA

omitted

### AT Nuke Power

#### Non-uq – laundry list of factors limit nuke power growth.

Bunn 19 [Matthew Bunn, (Matthew Bunn is a Professor of Practice at Harvard University's John F. Kennedy School of Government. His research interests include nuclear theft and terrorism; nuclear proliferation and measures to control it; the future of nuclear energy and its fuel cycle; and policies to promote innovation in energy technologies.) "Nuclear Disarmament, Nuclear Energy, and Climate Change" Belfer Center for Science and International Affairs, 3-1-2019, https://www.belfercenter.org/publication/nuclear-disarmament-nuclear-energy-and-climate-change, DOA:2-5-2020 // WWBW]

A wide range of **constraints and risks have limited nuclear energy’s growth** in the past and could do so in the future unless appropriately addressed through modified policies, new technologies, or both. Economics **Nuclear power is only likely to grow on a large scale if it is economically competitive** with other energy sources, particularly low-carbon sources. Nuclear energy is competitive today in markets such as China, which: (1) can build reactors at lower cost and on shorter schedules than is typical in Europe or the United States; (2) offers low-cost government-backed financing for state-owned nuclear companies, and stable nuclear electricity prices; and (3) has a market with little competition from cheap natural gas. But **in many markets, new nuclear plants are simply uncompetitive** today.9 Policies that provide low-cost financing and smooth the way for rapid construction can help, and many developers of advanced reactors claim their systems will be cheaper than current systems (and possibly able to provide industrial heat as well as electricity), but this remains to be demonstrated. **Accident risks**: real and perceived Similarly, **to grow** to terawatt scale, **nuclear energy would probably have to achieve—and be seen to have achieved—very high levels of safety.** Another Fukushima-scale catastrophe would likely doom prospects for such large-scale nuclear growth. Nuclear safety will have to improve if multiplying the number of reactors by threefold or even fivefold is not to increase the annual risk of a major accident by a similar factor. Yet even maintaining the levels of safety that have been achieved with improvements after the Fukushima accident may be a challenge, for as nuclear energy spreads, it is increasingly going to move to developing countries with lower ratings in World Bank indicators for regulatory effectiveness and control of corruption, raising obvious concerns. Here, too, both policy and technology could make a difference. On the policy side, investing in ensuring that regulators have the authority, resources, expertise, and culture needed to develop and enforce effective safety rules, and taking steps to build strong safety cultures throughout the industry, can make an immense difference. In the longer term, many advanced reactor designs are striving for increased passive safety, including, in some cases, reactors where even cutting off all cooling and walking away without doing anything to respond would not lead to a radioactive release—or so the designers claim. Terrorism risks: real and perceived **Terrorists could also cause a large reactor accident, for example by destroying power and cooling systems or draining water from a spent fuel pool.** While a great deal has been done to improve nuclear safety around the world since the Fukushima accident, new steps to protect nuclear reactors from sabotage have been less substantial. Here too, both policies focused on stronger security requirements and security cultures and technological improvements focused on making it more difficult to cause a major radioactive release (whether by accident or on purpose) can reduce the risk significantly.10 Nuclear security and its relation to nuclear energy, non-proliferation, and disarmament are discussed in more detail below. Siting and public acceptance **Gaining public approval for new nuclear reactor sites is proving to be a major constraint on nuclear energy—even in authoritarian countries** such as China.11 Avoiding further nuclear melt-downs is by far the most important step to build public acceptance. Beyond that, on the policy side, strong and visible actions to ensure safety, combined with careful, step-by-step processes to listen to and build trust with local communities will be critical. On the technology side, if advanced reactors offer not only enhanced safety but more understandable, demonstrable safety, that could help build public confidence. Proposals for factory-built offshore nuclear plants—if implemented with appropriate safety and security—could make it possible to site large nuclear plants near the demand centers represented by coastal cities. Nuclear waste management A 1.5 TW nuclear energy infrastructure, if operated on a once-through cycle, would generate 20,000–40,000 metric tons of spent fuel every year (depending on the burnup). That may seem like an enormous amount, but it should be remembered that a single 1 GWe pulverized coal power plant generates well over 500,000 tons of toxic solid waste every year—not even counting the immense quantities of carbon dioxide waste it dumps into the atmosphere. The difficulty of siting nuclear waste repositories has been an enormous and lasting political problem for nuclear energy; but Finland and Sweden have now successfully sited nuclear waste repositories with the support of the local communities, showing it can be done, with an appropriate focus on building trust.12 In the interim, the technology of dry casks makes it possible to store spent fuel cheaply, safely, and securely for decades, providing an important element of flexibility for whatever long-term use or disposal option is ultimately chosen.13 If nuclear wastes are managed appropriately—something the United States and the Soviet Union, among others, both failed to do during the Cold War—the actual hazard to humans or the environment per kilowatt-hour generated is quite small and occurs primarily tens to hundreds of thousands of years in the future. With repositories built in large areas of rock or salt, so they could be continually expanded by further drilling, handling the volumes of waste from a terawatt-scale nuclear enterprise would not be a major obstacle to nuclear power growth.

#### Turn/ disarmament increases support for nuclear power.

Bunn 19 [Matthew Bunn, (Matthew Bunn is a Professor of Practice at Harvard University's John F. Kennedy School of Government. His research interests include nuclear theft and terrorism; nuclear proliferation and measures to control it; the future of nuclear energy and its fuel cycle; and policies to promote innovation in energy technologies.) "Nuclear Disarmament, Nuclear Energy, and Climate Change" Belfer Center for Science and International Affairs, 3-1-2019, https://www.belfercenter.org/publication/nuclear-disarmament-nuclear-energy-and-climate-change, DOA:2-5-2020 // WWBW]

As noted above, **nuclear energy is unlikely to get the support it needs to grow to the terawatt scale unless governments and publics believe that such growth will not create major new nuclear weapons risks**. Hence, **there is a political connection between** achieving **nonproliferation** progress **and** the future of **nuclear energy.** At the same time, asjust discussed, limiting the proliferation risks of large-scale nuclear growth is likely to require international agreement to implement major new institutional and technical steps. Given the intense political polarization between the nuclear haves and the have-nots (and among the nuclear haves) that currently prevails, gaining such international agreements will be difficult. **Non-nuclear-weapon states are only likely to offer their support for stronger nonproliferation measures—**which they see as more constraints on them—**if they see the nuclear weapon states making progress on disarmament, showing they are willing to accept more constraints on their own programs.** Hence, in the long term, **progress on disarmament will indirectly be an important enabler of large-scale nuclear energy growth.**

### ---Warming

#### Nuclear power can’t solve warming.

Johnson 19 [Jeff Johnson, () "Can nuclear power help save us from climate change?" Chemical &amp; Engineering News, 9-23-2019, https://cen.acs.org/energy/nuclear-power/nuclear-power-help-save-us/97/i37, DOA:1-29-2020 // WWBW]

But **steep barriers to a nuclear energy renaissance exist**, among them **aging reactors, high costs to build new ones, safety concerns, and questions about how much nuclear is needed** in the world’s energy mix. Historically, nuclear power has played its biggest role in advanced economies, where it makes up 18% of total electricity generation today. France is the most dependent on nuclear energy, with 70% of its electricity generated from nuclear reactors. By number of operating reactors, the US leads with 98 power plants capable of generating 105 GW; France is second with 58 reactors generating 66 GW of electricity. However, many of those reactors are old. **In the US, the European Union, and Russia, plants average 35 years or more in age, nearing their designed lifetimes of 40 years. Building new nuclear power plants based on traditional designs will be nearly impossible in developed economies**, IEA analysts say. The challenges include **high costs and long construction times, as well as time needed to recoup costs once plants start running,** plus ongoing issues with radioactive waste disposal. In addition, the competitive electricity marketplace in the US makes it hard to sell nuclear energy against that generated more cheaply through natural gas, wind, or solar. Right now, only 11 nuclear plants are under construction in developed economies—4 in South Korea and 1 each in seven other countries. There is more potential for nuclear energy expansion in developing nations with state-controlled, centralized economies. China is the world’s third-largest nuclear generator, with 45 reactors capable of producing 46 GW of electricity. China also has the biggest plans for new power plants, with 11 at various stages of construction, the IEA says. India is building 7; Russia, 6; and the United Arab Emirates, 4, with a sprinkling of other new plants coming throughout the rest of the world. All will be state owned, the IEA says. The nuclear industry’s main hope for future expansion lies in a new generation of small, modular reactors that generate less than 300 MW each and are amenable to assembly-line construction. These are still under development, however, with none licensed or under construction. A middle path between new plants and no plants is lifetime extensions for existing reactors. The IEA estimates the costs for maintenance and improvements needed to continue operating an existing nuclear reactor for an additional 10–20 years would be $500 million–$1.1 billion per gigawatt, an amount the IEA says is comparable to constructing a renewable—solar or wind—system of the same size. The result would be effectively 1 GW of new, low-carbon electricity without the delays involved in siting and building a new solar field or wind farm. In the US, the Nuclear Regulatory Commission (NRC) has already renewed and extended the operating licenses from 40 to 60 years for 90 of the 98 operating reactors. The industry is now focusing on renewals to operate for up to 80 years. Similarly, other countries are considering extending existing reactor operations but for shorter periods, the IEA reports. These extensions present what the Union of Concerned Scientists (UCS) terms a “nuclear power dilemma.” The nonprofit organization, which advocates scientific solutions to global problems, has been a frequent nuclear industry critic. “We are very cognizant of this climate challenge and the need to act quickly to cut greenhouse gas emissions,” says Rachel Cleetus, the UCS’s climate and energy policy director. The UCS’s solution for providing energy in a warming world is to tax and cap carbon dioxide emissions and introduce a low-carbon electricity standard for all energy sources. Such measures would drive the construction and development of low-carbon energy facilities and technologies, the UCS says. For nuclear energy in particular, the organization endorses temporary financial support for the extension of some plants, conditioned on rate protection for consumers, safety requirements, and greater investments in renewables and energy efficiency. “We can’t just give them lots of money and blanket life extensions,” Cleetus says. **Scenarios and mathematical models** run by the UCS **show nuclear is very unlikely to grow beyond providing at most 16% of the world’s electricity generation capacity by 2050 even with aid, far short of the 85% or more of the** low- or noncarbon **generation needed to address global warming.** Underlying the debates about power plant costs and operating lifetimes are questions of safety and risks—real and perceived—of nuclear reactors and radioactivity. These concerns have made nuclear power unpopular in the US, Germany, Japan, and elsewhere. The San Onofre Nuclear Generating Station (SONGS), resting on the US West Coast north of San Diego, provides an example of why. Seven million people live within 80 km of the plant. A stormy relationship between SONGS and its surrounding community goes back decades. Most recently, the facility was completely shut down in 2013 after two nearly new steam generators failed. The replacements were part of a $670 million overhaul that was supposed to provide 20 more years of life for the plant. Then, while transferring used fuel into a storage vault last year, contractor Holtec International mishandled and nearly dropped a 50-metric-ton spent fuel canister. The NRC subsequently cited plant owner Southern California Edison for failing to properly report the incident, as well as conditions that led to it. The public learned about the slipup from a whistle-blower speaking at a community meeting. The event halted fuel transfer operations, which are just now restarting. “Repairs and replacements could be done properly at nuclear plants,” says L. R. “Len” Hering Sr., a retired rear admiral of the US Navy who lives near SONGS and is cochair of a task force established by Rep. Mike Levin (D-CA) to address community safety concerns at the facility. Hering bases that assessment on his navy experience. “Ships are designed to last roughly 30 years, and when the navy goes through a process of life extension, we do extensive testing and evaluation,” he says. “We make certain all components are up to snuff. In the navy, repairs are made by a focused group of individuals separate from the ship’s operators, and it is not about cost.” He has not seen a similar level of attention and rigor at SONGS. Once a nuclear advocate, he has cooled on nuclear power because of concerns over management and regulation. “I don’t believe the NRC has the capacity to properly inspect and oversee operations or maintenance,” he says. Meanwhile, some of the groups advocating for strong action to address climate change question whether more nuclear energy is necessary. Over the past 20 years, **as nuclear power generation has declined, renewable sources have expanded by some 580 GW—more than the output of all the world’s nuclear power plants**—to make up the difference. Consequently, the overall share of low-carbon electricity sources—hydropower, nuclear, solar, and wind—has stayed even at about 36%. The IEA applauds the growth of renewables but says that it is unprecedented and not sustainable. Hence the agency’s support for nuclear power. However, energy researchers at the World Resources Institute and the UCS, speaking at a recent US congressional hearing, say **renewable sources will continue to expand, and major increases in energy efficiency are on the horizon. In addition, the researchers expect that as more renewable energy facilities come on line, new technologies will be developed to address the challenge of variable output from renewable energy sources**, such as with solar on an overcast day. **Overreliance on nuclear might in fact stall development and installation of technologies needed for a transition to a low-carbon future**, Cleetus argues. Her modeling shows that **capital investment needed for renewable energy development**—building high-voltage power lines, advanced batteries and other storage systems, and of course, renewable resources themselves—**could be funneled off to build and retrofit more nuclear power plants.** And then there are those who question **whether nuclear energy can even be called low carbon if** greenhouse gas **emissions are considered for the full energy cycle, including** **plant construction, uranium mining and enrichment, fuel processing, plant decommissioning, and radioactive waste deposition.**

### AT Prolif DA

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### ---AT Dirty Bombs

#### Overview: dirty nuclear bombs are not what they sound like – a dirty bomb is adding radioactive material to conventional bomb to spread radioactive contamination.

#### 1] non-uq – making a dirty bomb is easy and doesn’t require nuclear arsenals

NTI 15 [Nuclear Threat Initiative, () "Radioactive "Dirty Bombs" Are Weapons Of Mass Disruption" 12-30-2015, https://www.nti.org/learn/radiological/, DOA:12-16-2019 // WWBW]

According to the International Atomic Energy Agency (IAEA), "**millions of radioactive sources have been distributed worldwide** over the past 50 years." They are dispersed across thousands of commercial, industrial, medical and research sites in more than 100 countries, and many of them are poorly secured, particularly during transport when they are vulnerable to theft. In fact, **the** same **isotopes used** for life-saving blood transfusions and cancer treatments **in hospitals** around the world— such as cesium-137, cobalt-60 and iridium-192—**could be used to build a bomb.** Many medical, commercial and industrial groups that handle these materials are ill-equipped to secure them, and a lack of regulatory controls in many countries has led to thousands of missing or stolen radiological sources. A study by the James Martin Center for Nonproliferation Studies found an alarming 170 incidents where nuclear or radiological material was lost, stolen or outside regulatory control in 2014 alone.

#### 2] case outweighs

NTI 15 [Nuclear Threat Initiative, () "Radioactive "Dirty Bombs" Are Weapons Of Mass Disruption" 12-30-2015, https://www.nti.org/learn/radiological/, DOA:12-16-2019 // WWBW]

**A radioactive “dirty bomb”** or radiological dispersal device (RDD), made by combining radioactive material with conventional explosives to spread it, **would not cause catastrophic levels of death and injury on the scale of a nuclear weapon detonation.** A dirty bomb explosion could cause significant short-and long-term health problems for those in the area and could leave billions of dollars in damage due to the costs of evacuation, relocation and cleanup.  Buildings would have to be demolished and debris removed. Access to a contaminated area could be limited for years, as a site is cleaned well enough to meet environmental standards for protecting the public against harmful gamma rays that could penetrate human skin and potentially cause cellular damage.

## AT Politics DAs

### AT 2020

#### No link—normal means is to pass controversial bills after the election.

Ota 16 [Amanda Ota, () "Congress usually comes up lame in 'lame duck' POTUS years" WJLA, 4-7-2016, http://wjla.com/news/nation-world/congress-usually-comes-up-lame-in-lame-duck-potus-years, DOA:6-12-2018 // WWBW]

WASHINGTON (SINCLAIR BROADCAST GROUP) — The White House is currently in the midst of a number of political battles with Congress, as **the** Obama **administration struggles to get the legislative body to take action during** the **election season. Congressional reluctance to take action has been common** so far this year, **with lawmakers refusing to make moves in the shadow of the election.** Government Track, a website that keeps track of the actions of Congress,tallies up the number of laws enacted, resolutions passed and votes held since the 93rd Congress of 1973 and 1974. Based on their count, the least a Congress voted on legislation historically was 390 times, which occurred during the 112th Congress. Since then, the two following Congresses to serve under President Obama's tenure have managed to narrowly escaped similarly dismal vote records. "Our calculation finds that the 113th just barely avoided the dubious title of "least productive Congress in modern history," The Pew Research Center's Drew Desilver wrote back in 2014. "In all, the expiring Congress enacted 296 laws, 13 more than the 2011-12 Congress." So far, the current Congress has not shown a lot of promise, having thus far only voted on 4 percent of legislation before them. As David Mayhew, political scientist and Sterling Professor in the Political Science Department at Yale University described it, it is still too early to rate the ongoing session. "I don't see anything to chalk up yet," Mayhew said describing calendar year 2016 as "stuttering." "But it's early," he cautioned adding that the "best bet may be a fix of the Puerto Rico fiscal crisis." "They seem to be blocking on a criminal sentencing reform. The Pacific trade deal is low in the water." Saying how he was unable to tell, Mayhew explained that "**in** recent **election years**, a fair amount of **enacting has happened during a** November-December session **after the election.** " Analyzing legislation that had been passed during the lame duck session of the 113th Congress, DeSilver wrote that "we classified 71 of the 111 laws passed during the lame duck session as substantive, or 64% the lowest such percentage among the past eight Congresses." The fact **that Congress isn't making any game-changing legislative moves is unsurprising, according to experts.** Speaking with Sinclair earlier in the election, Georgetown's Dr. Joshua Huder, Senior Fellow at Georgetown University's Government Affairs Institute, explained **this Congress was bound to be unproductive.** "If you started off really well you'd still have a really bad year, this is doomed to be a low turnout, low productivity congress," Huder said Huder said to **expect much more political messaging than actual legislation.** For example he described the 112th and 113th congress as, "obsmially [un]productive" and "terrible."

### AT Modi Base – Econ

#### Modi isn’t pursuing reform now and won’t unless he’s forced away from nationalism.

Lakhani 1/20 [Shezad Lakhani, (Shezad Lakhani is a former economic analyst with the U.S. government whose career focused on South Asia., ) "How the Modi Administration Is Hamstringing the Indian Economy" The Diplomat, 1-10-2020, https://thediplomat.com/2020/01/how-the-modi-administration-is-hamstringing-the-indian-economy/, DOA:1-27-2020 // WWBW]

--- this card was actual flames

Prime Minister Narendra **Modi’s** ability to repeatedly reorient the focus of his administration has been key to his political rise and resilience, but his administration’s **unwillingness to have** and communicate **a uniform economic ideology is hamstringing the Indian economy.** While an ever-evolving agenda makes Modi appear proactive in the eyes of his supporters and India’s hyperactive media, constantly changing what policy trade-offs are acceptable to the government leaves market participants confused about the government’s priorities. Economic policy dissonance has spanned a number of issues. Financial Sector Stress: The Modi government inherited a bad loans crisis in the banking sector. The government initially backed the central bank’s attempts to force banks to recognize the problem, proclaiming that the government would not allow corrupt lending practices to continue. It also passed a bankruptcy code, which has improved conditions even though it has moved slowly. However, as banks were forced to disclose troubled loans and provision against them, and as the enormity of the problem became evident, the government’s will to tackle it began to wane. The Modi government pushed out two central bank governors who heralded more transparency, moved away from forcing greater recognition as the economy slowed, and now is pushing banks to make questionable loans in “loan melas.” As the problem has spread from banks to India’s shadow banks, the lack of transparency in the sector has led to confusion about the extent of the problem and possible solutions. Corruption: In November 2016, Modi surprised everyone by demonetizing 86 percent of the currency in circulation, with the stated goal of combatting black money and corruption. While the move led to economic chaos that lasted a few months, it paid political dividends as Modi’s party resoundingly won the state elections in Uttar Pradesh, India’s largest state, that followed. Yet, only a few months later Modi approved a new system for political contributions called electoral bonds, disregarding concerns from India’s central bank about money-laundering and donations through shell entities. Data indicates that Modi’s BJP has received up to 95 percent of all donations made via electoral bonds. Budget Discipline: The Modi government early in its tenure worked to reduce India’s high budget deficit, benefitting from the substantial fall in global oil prices. While the government has officially stuck to its deficit reduction plan, as the economy slowed after demonetization and the introduction of a new goods and services tax (GST), the government pushed state-owned companies and departments to increase spending and borrow off-budget. Without credible budget data it is difficult to determine the extent of the problem — a recurring problem with the Modi government — but some experts estimate that the combined government deficit in India is almost 9 percent of GDP. Trade: While touting its goal of “Make in India,” the government became the first in decades to increase tariffs on imports, hurting India’s potential to integrate into global supply chains. India remained in discussions over the Regional Comprehensive Economic Partnership, a regional trade agreement with China and major Asian economies, and as discussions concluded Indian Minister of Commerce Piyush Goyal sent signals that India would join the agreement. However, as the government received criticism from India’s left and elements of their own base, Modi decided not to join the trading bloc. In its sixth year in office, **the Modi government’s** political and societal vision of creating a more Hindu India is clear, but its **economic record is full of contradictions.** While it has announced many high-profile programs, it has not been able to stitch them into a coherent policy direction. Modi has articulated “ease of living” as a goal and highlights how the government has used technology to stem corruption and leakages in India’s bureaucracy. As the same time it gave the bureaucracy unprecedented power during demonetization and is considering doing so again with a citizen registry, even though these measures are beyond the capacity of most efficient organizations, let alone the short-staffed and under-qualified bureaucracy that India possesses. Similarly, the government is obsessed with its ease of doing business rankings but is unwilling to definitively tackle the stress in the financial sector needed to spur investment. **Policy Reincarnations Without a Core Economic Identity** **Modi**’s ability to reinvent his political identity has been a successful electoral strategy. He won the 2014 national election on the promise of good economic days, triumphed in UP as an anti-corruption crusader, and **was re-elected nationally by touting improved provision of government services and a tough foreign policy.** The current “anti-immigration” push is reportedly tied to upcoming state elections in West Bengal. Any party in India’s diverse and multi-party system only needs a plurality of voters to hold enormous political advantage; in 2019 BJP received over 37 percent of the vote, which led it to win more than 55 percent of seats. The reincarnations have allowed Modi and BJP to stitch together a plurality of voters, and ally or buy coalition members when necessary, but left behind a dizzying array of policies that are implemented partially and discarded once the political mileage from them is maximized. **Successful economics**, on the other hand, **requires supporters, opponents, and apolitical participants to understand and adapt to the policy priorities of the government.** Even if it is assumed that everyone who voted for the BJP knows the government’s policy priorities or is willing to act on trust and faith, the over 60 percent of the country that didn’t vote for the party needs a clear idea of what policies to expect and how to plan around them, which the Modi government has not laid out or demonstrated. Economic studies in the United States suggest that economic policy uncertainty dampens investment decision and employment creation, which is precisely the crisis facing the Indian economy. Total investment as a percent of GDP peaked in 2011 at almost 40 percent of GDP, but has declined steadily to little more than 31 percent in 2019, according to IMF data. While Indian employment data is poor, anecdotal evidence including several instances of thousands of job applications for low level government jobs, highlights the enormity of the job crisis in India. **Adding Intolerance Fuel to the Uncertainty Fire** This **lack of economic policy direction is exacerbated by the government’s intolerant social agenda.** While **Modi**’s government gave social space in its first term to cow vigilante groups that largely targeted Muslims, it **has steeply intensified its Hindu nationalist agenda** in the last few months. In August, the government unilaterally removed the special status for Jammu and Kashmir. Fearing a backlash from the state’s populace, the Modi government has orchestrated a prolonged crackdown in the former state, including the longest internet shutdown in any democracy. Then, in December, the government passed a Citizen Amendment Act (CAA) creating a special citizenship path for all religious groups from Pakistan, Bangladesh, and Afghanistan – except for Muslims. It has tied the move to the promised National Registry of Citizens (NRC), which would require all residents to prove their citizenship. While all other residents who could not prove their citizenship would have the recourse of regaining citizenship through the newly created path, millions of Muslims could face legal limbo and detention. The size of India’s Muslim population, combined with the broader repercussions of the Modi government’s policies, make these actions not only an attack on India’s secular identity but a threat to the economy. The approximately 180 million Muslims in India would themselves be the eighth most populous country in the world. Jeopardizing the social standing, identity, and potentially safety of such a large number of people would inevitably reduce the trust and faith they need to invest and participate in a thriving economy. Meanwhile, the government appears to have not expected the protests that have sprung up against the CAA and NRC. Its decision to curb internet services and use strong arm tactics to combat protestors in multiple states is not only hurting India’s image abroad, including among foreign investors, but hampering everyday economic life. The government recently implemented a citizen registry in Assam, and while most residents made the final list, almost 2 million people were left off. While the registry was intended to target Muslims and migrants, the difficulty of enacting such a list combined with shortcomings of the Indian bureaucracy has led to people of all backgrounds being left out. Expanding this move to the rest of the country would leave over a billion people scrambling to prove their citizenship, divert strained government resources to administer such an endeavor, and leave tens of millions in legal limbo. **Crisis Should Reveal Character A slowing economy has brought India’s long-standing economic problems to the forefront, but instead of leveraging the moment of the crisis to move boldly to reform the economy, the government has continued its policy of half-measures and combined them with Hindu nationalist policies that divide and distract the nation.** The government’s former chief economic adviser has compared the depth of the current slowdown with the macro-economic crisis India faced in 1991. In response to that crisis, the government began to dismantle India’s “license raj,” which not only averted the crisis but also provided the momentum and direction that has powered India’s economic growth for multiple decades. In response to the growth slowdown, the Modi government announced a reduction in corporate taxes, a long-standing complaint of businesses, and a privatization program that has yet to bear any fruit. The targeted measures, while being helpful, are not sufficient to address the systemic problems, especially in the financial sector. **Ramming through divisive social policies as the economy is facing a severe slowdown indicates that the government either is intentionally trying to distract the populace from the state of the economy or is not taking the economic slowdown seriously enough to devote its entire effort toward it.** It is inevitable that the economy will eventually bottom out from the current slowdown in a few months or a few quarters. It will be easy for the government to claim victory and state that things are fine as economic numbers, which likely overestimate growth, rebound. That, however, will be short-sighted. If the government cannot provide clear direction on what types of policy trade-offs it is willing to accept and what economic model it is willing to subscribe to, India will continue to not live up to its economic potential.

# 1AR – K

## 1AR – Toolbox

### 1AR – Framework

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### 1AR – Extinction First

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## 1AR – Security

### 1AR – No Threat Inflation

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### 1AR – AT Reps Link

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## 1AR – Baudrillard

### TL

#### Send this silliness away – ask yourself if you heard a warrant during any part of the K and then vote aff because their ev is just a bunch of assertions about signs.

#### rest is omitted but people should read ^^^ more imo

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