Year of the Paper Tiger:

The US Military's Pursuit of Nuclear Primacy, Missile Defense, and a New Cold War with China

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Introduction

> *"Are we really prepared to raise the starting gun in a new arms race in a potentially dangerous world? … Because make no mistake about it, folks, if we deploy a missile defense system that is being contemplated, we could do just that. Step back from the ABM Treaty. Go full steam ahead and deploy a missile defense system, and we will be raising the starting gun. Let's stop this nonsense before we end up pulling the trigger."*[1]
>
> – Joe Biden, then-US Senator, September 10, 2001

Close to three decades after the Cold War, our contemporary geopolitical landscape remains transformed by a war that was "never declared and never terminated."[2] The nearly forty-five-year conflict between the United States (US) and the Soviet Union (USSR) dominated international relations for the second half of the 20th-century, establishing itself as the largest and most prolonged ideological clash in modern history. After decades of teetering back and forth over the brink of nuclear war, the Cold War miraculously ended in peace at the end of 1991, leaving the new Russian state to rise from its ashes and the US to dominate as the sole global superpower. Yet thirty years later, we are again preparing for a clash between superpowers, once more with an American hegemon in the west and a communist-claiming challenger from the east: now, in Russia's place, China.[3]

Over the last decade or so in the US, The People's Republic of China has increasingly come to be seen as one of the biggest threats to American national security of the modern era. Sources from both the US government and American media highlight China's astonishing economic rise, declaration of communism, regional power-seeking behavior, record of human

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[1] Quote sourced from Leah Matchett, "Debating Missile Defense: Tracking the Congressional Record," *Arms Control Association*, March 2021, https://www.armscontrol.org/act/2021-03/features/debating-missile-defense-tracking-congressional-record.
[2] P. H. Kapp, "Die Koue Oorlog: Die Wêreld Se Langste Oorlog? / The Cold War: The World's Longest War?", *Scientia Militaria - South African Journal of Military Studies* 27, no. 1 (2012), https://doi.org/10.5787/27-1-227.
[3] Xuetong Yan, "Chinese Values vs. Liberalism: What Ideology Will Shape the International Normative Order?," *The Chinese Journal of International Politics* 11, no. 1 (Spring 2018), pp. 1–22, https://doi.org/10.1093/cjip/poy001.

rights abuses, and/or evolving pursuit of nuclear capabilities as grounds for increased threat. All of these are cited as cause for great alarm — with the latter, Chinese nuclear developments, widely used as cause for a "strong" US nuclear response. In the eyes of much of the American public, media, and military, an eventual war with China may be less a question of *if* and more a matter of *when*. Meanswhile, the question of potentially-nuclear conflict continues to loom unanswered and fuel talk of so-called protection — national missile defense (NMD).

With this grim paradigm in mind, it is no wonder that within the US, discussions about *how* the two states have arrived at the current stand-off culminate in all fingers pointing at China. China's recent nuclear developments in particular are depicted as wholly destabilizing, aggressive, and threatening, and they are frequently used to justify "aggressive" US nuclear policy. But seldom is the question turned back on the US to ask, "What about the international environment has prompted these specific nuclear developments from China in the first place?" Prompted by this gap in the narrative, a detailed but straightforward investigation of US nuclear policy has unearthed a radically different storyline than one of end-all Chinese culpability. In evaluating and connecting a myriad of evidence ranging from violations of nuclear deterrence principles to billions wasted on national missile defense, a new trail of evidence has surfaced altogether. It points to the US as the culpable party — not China.

With beginnings in the US's departure from the ABM Treaty in 2002 and connecting to flashpoints like Defense Department nuclear policy documents, the story traces current tensions to US nuclear behavior, specifically national missile defense (NMD). Consequently, this thesis is centered upon the idea that American nuclear policy, specifically the pursuit of NMD, is fundamentally at fault for why the US is re-entering a quasi cold war with China. Meanwhile, from this evidence- rather than rhetoric-based inquiry emerges an astronomical discrepancy

between popular perception and the US's actual nuclear policies; threat inflation has turned China into a "paper tiger" of nuclear proportions.[4] Using this novel lens, it is clear that the US is responsible for instigating and feeding the current Sino-American nuclear clash by chasing NMD — and, consequently, the US needs to lead in policies of de-escalation. In facing the real possibility of an international "limited" nuclear war that can never promise to stay limited, the importance of this focus and of this conclusion simply cannot be overstated.

Why Nuclear and not Conventional?

With regard to the conflict between the US and China, one might ask, "Why the specific focus on nuclear capabilities?" State security is multifaceted and nuanced, and to only focus on nuclear weapons, policies, and postures can be reductive. To that, this thesis answers that nuclear weapons have completely transformed modern war and are both symbolically and tactically the end-all weapon. For the entirety of recorded history until WWII, states waged war with "conventional weapons," where the costs waxed and waned along with states' capabilities and resources. Yet within a decade after the development and usage of the atomic bomb by the US at the end of WWII, the entire nature of war changed. Nuclear weapons, especially Hydrogen bombs, make the ultimate outcome of escalation between great powers entirely predictable: total destruction.[5] In an era where nuclear capabilities have become the ultimate apex of great power conflict, this calls for a "different kind of reasoning. … In a conventional world, one is uncertain about winning or losing. In a nuclear world, one is uncertain about surviving or being

[4] The term "paper tiger" is borrowed from Jack Snyder, *Myths of Empire: Domestic Politics and International Ambitions* (Cornell University Press: 1991). This thesis uses a slightly more general and colloquial definition than does Snyder's scholarship, but his work has inspired its usage.

[5] Kenneth Waltz, *The Spread of Nuclear Weapons: An Enduring Debate* / Scott Sagan, Kenneth Waltz (New York: W. W. Norton & Company, Inc., 2013), 8–9. While the degree of non-conflict that we see in the real world does not dovetail perfectly to the extent to which the theory describes, there has been no conventional war between great powers since the end of WWII. The era between present-day and 1945 has hence been named the "Long Peace."

annihilated."[6] Despite this reality, the discourse on a US-China war is not about conventional warfare. Instead, there is new discussion of waging a so-called "limited nuclear war" with China.[7] Consequently, in alignment with this line of reasoning and this essay's limited scope, this argument will focus only on nuclear capabilities and primarily concentrate on the effects of NMD.

Why China and not Russia?

During the Cold War, the USSR was the US's nuclear contender for almost fifty years. Russia is also the only state to ever have had a comparable number of warheads to the US; there are currently an estimated 3,600 warheads currently in the active American stockpile and 4,300 in the Russian counterpart.[8] Meanwhile, estimations put China at 350 warheads, with no other nuclear states at more than 300.[9] Consequently, a more-than-reasonable question may be, "Why the focus on China and not Russia?"

The answer is in the fact that Russia is a declined power while China is a rising one. It is true that Russia is having a current "beyond-the-grave" moment in Ukraine, where the invasion that began in February 2022 has now become the biggest land war that Europe has seen since WWII.[10] However, the evidence points to perceptions of China as posing the biggest nuclear threat to US security. This thesis will hence focus on the Sino-American relationship and the alleged, new, and intensifying security dilemma. This does not exclude the possibility of future

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[6] Waltz, *The Spread of Nuclear Weapons,* 9. Notably, in a conventional world, offensive and defensive weapons cannot be distinguished, but in a nuclear world, you can choose which and hence escape the security dilemma.
[7] One can see this kind of language in a plethora of government documents that address Sino-American tensions, ranging from 2002 to 2022. This will be explored and analyzed in-depth in a later section.
[8] "Nuclear Weapons: Who Has What at a Glance," Arms Control Association, January 2022, https://www.armscontrol.org/factsheets/Nuclearweaponswhohaswhat.
[9] Hans M. Kristensen and Matt Korda, "Chinese nuclear forces, 2020," *Bulletin of the Atomic Scientists* 76, no. 6 (2020), 443-457, https://doi.org/10.1080/00963402.2020.1846432.
[10] Dan Bilefsky, Richard Pérez-Peña and Eric Nagourney, "The Roots of the Ukraine War: How the Crisis Developed," *New York Times*, April 21, 2022, https://www.nytimes.com/article/russia-ukraine-nato-europe.html?name=styln-russia-ukraine&region=TOP_BANNER&block=storyline_menu_recirc&action=click&pgtype=LegacyCollection&variant=show&is_new=false.

US nuclear policies folding Russia into further justifications for US nuclear primacy, pointing to Russian aggression as such a threat that the US needs "more and better." In fact, this appears to be exactly what will take place in the near future. Yet ultimately, the new cold war is with China, not Russia, and this study analyzes this emerging "threat."

Why Realism and not Other Theories?

This research has determined that "hybrid"-style realist theories reflect some of the strongest conclusions on the perceived Sino-American security dilemma as well as some of the most powerful prescriptions for moving forward.[11] These theories separately explain systemic outcomes with theories of IR and state behavior with theories of foreign policy to offer compelling analyses.[12] This work will predominantly draw from the fundamentals of these realist theories to analyze the alleged Sino-American security dilemma and analyze US nuclear policy. It will also align with the defensive realist perspective that the security dilemma *is* able to be overcome and/or dampened, as opposed to offensive realism's view on its nature as inescapable and unchanging.[13] Further, this essay will operate primarily at the state level of analysis, as framed by Waltz's "second image" of political theorizing and merited by this work's focus on federal-level US nuclear policy.[14]

Methods

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[11] John J. Mearsheimer, "Realists as Idealists," *Security Studies* 20, no. 3 (2011), 425: "Snyder and Van Evera fit neatly in the Waltzian tradition because the realist component of their theories is essentially a theory of international politics while the unit-level component of their theories is in effect a theory of foreign policy." For more on how realists have combined system-level variables with unit-level ones to create "hybrid theories," which ostensibly can explain both systemic outcomes in the international system and state behavior (i.e. foreign policy) at the domestic level, see this same article by Mearsheimer.

[12] See any formative pieces from Stephen Walt, Jack Snyder, Stephen Van Evera, or Robert Jervis for excellent representative examples.

[13] Robert Jervis, "Cooperation Under the Security Dilemma," *World Politics* 30, no. 2 (1978), https://doi.org/10.2307/2009958.

[14] Kenneth N. Waltz, *Man, the State, and War: A Theoretical Analysis* (New York: Columbia University Press, 1959).

As is customary in IR scholarship that addresses qualitative data and analysis, my thesis will rely heavily on process-tracing methods to establish causality, attempting to move beyond correlations by identifying directionality.[15] In such a dyadic conflict, to open up the black box of the state and use process-tracing to understand what we see is invaluable.[16] It hence remains extraordinarily useful and relevant to utilize such theoretical paradigms to conceptualize how the US is responsible for this conflict and how it can be remedied.

Moreover, in the data I found from popular media sources that involve rhetoric, I analyze the valence of the diction used and the sources' reach in order to determine its impact. Quantitative data includes public opinion polls, word frequencies within government documents, and nuclear proliferation data (i.e., numbers of warheads). Much of my research pivots on theory-based literature stemming from academia and pertaining to nuclear deterrence theory, realism, etc., but there is also thoughtful analysis of a multitude of government nuclear policy documents, presidential directives, and public statements from military leadership, among others.

Definitions

For accessibility purposes, the reader will find at the end of this thesis a glossary containing some fundamental definitions to contextualize the reading.

Outline of the Argument

This thesis is oriented around the research question, "What is the cause of the deteriorating nuclear relationship between the United States and China?" In seeking a nuanced

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[15] Stephen Van Evera, *Guide to Methods for Students of Political Science* (Ithaca: Cornell University Press, 1997). Also see Melanie Punton and Katharina Welle, "Straws-in-the-wind, Hoops and Smoking Guns: What can Process Tracing Offer to Impact Evaluation?", *Centre for Development Impact Practice Paper* no. 10 (April 2015).

[16] This approach is predominantly demarcated by the invaluable "levels-of-analysis" analytical framework in line with modified versions of the "images" that Kenneth Waltz originally theorized. To briefly detail his work on "images," which comprise this framework that is often used in contemporary international relations (IR) scholarship, it can be seen that the "first image" is the individual level, the "second image" is the nation-state/unit level, and the "third image" is the international system level. For the origins of the "levels-of-analysis" framework, see Waltz, *Man, The State, and War*.

answer, the argument logically progresses through a number of subsections, guided by the "Hypotheses" listed below. Part I, "Setting the Geopolitical Stage: Rhetoric or Reality?", begins the investigation by reviewing popular perspectives on Sino-American relations, evaluating rhetoric from media, polls on popular opinion, and statements from government and defense bodies. It is concluded that the dominant paradigm casts China as the responsible party for Sino-American nuclear tensions, which serves to further justify US efforts to procure missile defense systems.

Then, Part II, "Actual Nuclear Policy: American Madness sans MAD," strives to ground us back in reality by reviewing the actual documents, postures, and policies produced by both the US Department of Defense and Chinese government. This includes China's consistent commitment to a "No First Use" policy, low quantity of warheads relative to the US, and safety- rather than "readiness"-oriented alert levels for these weapons, all while the US pursues an offensive doctrine of nuclear war-fighting vis-à-vis missile defense. A flurry of US nuclear policy documents advancing aggressive nuclear posturing and policies, albeit to varying degrees, are determined to reflect war-fighting and not deterrence in a display of Mutually Assured Destruction (MAD) versus the diametrically opposed Nuclear Use Target Selection (NUTS). Nuclear deterrence theory and MAD are then reviewed in order to contextualize the following analysis on the destabilizing effects of US NMD.

Finally, prescriptions from mainly the defensive realist school of thought will comprise the last section, Part III's "Prescriptions from Theory and Conclusions for Praxis," before the piece concludes. Ultimately, this thesis advocates for the stance that the US should pursue a nuclear posture of minimal deterrence, adopt a no-first-use policy, end all pursuit of

nationally-based missile defense systems, and increase transparency in the relationship with China.

Hypotheses

This thesis centers on testing a series of hypotheses, each covered in the major sections of this paper following Part I's contextualization and provision of background.

> **Research Question:** What is the cause of the deteriorating nuclear relationship between the United States and China?
>
> **Primary Hypothesis:** Destabilizing American nuclear policies, specifically national missile defense (NMD), are the cause of the deteriorating Sino-American nuclear relationship; the US is responsible for this, not China.
>
> > **Part I Hypothesis:** There is an enormous and dangerous discrepancy between the American public's understanding of the current nuclear crisis with China and the US government's actual nuclear policy, with major threat inflation and fueled by primarily media rhetoric.
> >
> > **Part II Hypothesis:** The US is harming the Sino-American relationship and starting a "new cold war" with China through a pursuit of destabilizing nuclear policy, with a specific focus on national missile defense (NMD).

Part I – The Knowledge Gap: Rhetoric versus Reality

The most striking and dangerous facet of the entire nuclear-tipped entanglement between the US and China may be the complete misunderstanding among the American public about how tensions arose in the first place. Contrasting American *popular perspectives* with actual *state behavior* — perceptions versus reality, so to speak — effectively illuminates this discrepancy. For this reason, Part I of this thesis will address the former and Part II the latter. Ultimately, this argument supports that within the US, there is not only a relentless pursuit of destabilizing nuclear policies, specifically national missile defense, but also an utter lack of understanding among the public about the implications of such policies.

A brief examination of American perspectives on current tensions between the US and China reveals a narrative that is relatively cohesive on this point despite its diverse composition. From popular media and public opinion to government agencies and military apparatuses, there exist a plethora of different agents with a range of different interests. Yet they largely converge on the same baseline focus: China is the country aggressively escalating current nuclear tensions, threatening US national security with new nuclear developments, and thus starting a new cold war; the US is simply responding to Chinese aggression. Such a disconnect poses enormously dangerous consequences with regard to the potential of popular support for a "necessary" nuclear conflict with China.

Media Rhetoric

To see these popular perspectives in action, one simply has to tune in to American mainstream news. China's threatening behavior, nuclear or otherwise, dominates foreign policy sections of the nation's most widely-read newspapers. Headlines from the *Washington Post* quip that "China is ramping up nuclear and missile forces to rival US, Pentagon says."[17] The *New York Times* claims that "As China Speeds Up Nuclear Arms Race, the US Wants to Talk;"[18] CNN that "Top military official warns China and Russia are modernizing nuclear weapons faster than US;"[19] and Fox News that "US losing military edge in Asia as China looks like it is planning for war: US Indo-Pacific Command chief."[20] Authors write about the Chinese economy achieving

[17] Paul Sonne, "China is ramping up nuclear and missile forces to rival U.S., Pentagon says," *Washington Post,* September 1, 2020, https://www.washingtonpost.com/national-security/china-is-ramping-up-nuclear-and-missile-forces-to-rival-us-pentagon-says/2020/09/01/00c4dca4-ec95-11ea-a21a-0fbbe90cfd8c_story.html?outputType=amp.
[18] David E. Sanger and William J. Broad, "As China Speeds Up Nuclear Arms Race, the U.S. Wants to Talk," *The New York Times*, November 28, 2021, https://www.nytimes.com/2021/11/28/us/politics/china-nuclear-arms-race.html.
[19] Ellie Kaufman and Barbara Starr, "Top military official warns China and Russia are modernizing nuclear weapons faster than US," *CNN,* April 20, 2021, https://www.cnn.com/2021/04/20/politics/china-russia-nuclear-weapons/index.html
[20] Caitlin McFall, "US losing military edge in Asia as China looks like it is planning for war: US Indo-Pacific Command chief," *Fox News*, March 10, 2021, https://www.foxnews.com/politics/us-losing-military-edge-in-asia-as-china-looks-like-planning-for-war-admiral.

dominance over the US,[21] the aggression China has shown toward neighboring Asian states,[22] and the possible genocide of ethnic Uyghur Muslims in China's Xinjiang province.[23] A formidable cluster of articles point to the Department of Defense's 2021 assessment of Chinese military capabilities, claiming it provides "stark clarity [for] how drastically and fundamentally the relationship between the US and China is deteriorating and how much that trend could endanger American national security and global peace."[24] China is the ultimate threat, and the media calls for it to be treated as such.

Fascinatingly, many of these media sources explicitly link the impetus for Chinese nuclear developments to their concerns over NMD. In explaining China's reasons for pursuing more and better weapons, they cite Chinese experts' worries about NMD diminishing China's ability to retaliate to a nuclear attack.[25] A few even trace this back to the US's 2002 departure from the Anti-Ballistic Missile (ABM) Treaty,[26] which has been called the "cornerstone of arms

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[21] Robert Farley, "Can China's Economy Overtake the United States?", *The Diplomat*, July 23, 2021, https://thediplomat.com/2021/07/can-chinas-economy-overtake-the-united-states/.

[22] Lindsey W. Ford and Julian Gewirtz, "China's Post-Coronavirus Aggression Is Reshaping Asia," *Foreign Policy*, June 18, 2020, https://foreignpolicy.com/2020/06/18/china-india-aggression-asia-alliances/.

[23] Joel Gunter, "China committed genocide against Uyghurs, independent tribunal rules," *BBC News*, December 9, 2021, https://www.bbc.com/news/world-asia-china-59595952. This thesis uses the qualifier "possible" here because the term "genocide" in IR has major implications for international intervention, with details from Alexandra Smith, "'Genocide': To Use Or Not To Use," *Human Rights Pulse,* April 26, 2021, https://www.humanrightspulse.com/mastercontentblog/genocide-to-use-or-not-to-use: "Even today, the use of the word genocide is highly controversial in international institutions like the UN, wherein state and non-state actors are resistant to using it for fear of alienating allies or adversaries on a diplomatic platform." For more, see.

[24] Michael Schuman, "China Now Understands What a Nuclear Rivalry Looks Like," *The Atlantic,* February 16, 2022, https://www.theatlantic.com/international/archive/2022/02/china-russia-nuclear-weapons/622089/.

[25] Fiona S. Cunningham and M. Taylor Fravel, "China's nuclear arsenal is growing. What does that mean for U.S.-China relations?", *The Washington Post,* November 11, 2021, https://www.washingtonpost.com/politics/2021/11/11/chinas-nuclear-arsenal-is-growing-what-does-that-mean-us-china-relations/.

[26] "The Anti-Ballistic Missile (ABM) Treaty at a Glance," Arms Control Association, December 2020, https://www.armscontrol.org/factsheets/abmtreaty.

control"[27] — and the departure from which the Carnegie Endowment for International Peace has correctly identified as the cause of the renewed arms race with both Russia and China.[28]

In this way, some of the more incisive American media sources have followed the same trail of evidence as this thesis, attributing contemporary arms racing and nuclear tensions to destabilizing American nuclear policy. Yet far too few take the hard-line stance that it is solely the US's ongoing pursuit of NMD that is directly prompting China's advancement toward further advanced nuclear capabilities. If the destabilizing effects of missile defense are mentioned at all, they are a footnote placed at the end of a menacingly long list of recent Chinese nuclear developments.[29] On the whole, even if popular media does not overtly state that China is responsible for the deteriorating Sino-American relationship and nuclear tensions, it is implied by-and-large by virtue of omission.

Popular Opinion Polls

Considering the reach of mainstream media (MSM) in the US, it is no wonder that this narrative about the "new cold war" and China's role in it is reaching near-ubiquity. Just the four sources listed above — the *Washington Post,* the *New York Times*, CNN, and Fox News — have an estimated collective monthly readership of nearly 1.5 billion views, with 1,487,257,000 as of May 2021 and surely having increased since.[30] In the *NYT* alone, arguably the US's most

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[27] James M. Acton, " The U.S. Exit From the Anti-Ballistic Missile Treaty Has Fueled a New Arms Race," *Carnegie Endowment for International Peace*, December 13, 2021, https://carnegieendowment.org/2021/12/13/u.s.-exit-from-anti-ballistic-missile-treaty-has-fueled-new-arms-race-pub-85977.

[28] Cunningham and Fravel, "China's nuclear arsenal is growing."

[29] Jacob Parakilas, "China-US Tensions Put Nuclear War Back in the Spotlight," *The Diplomat*, November 6, 2021, https://thediplomat.com/2021/11/china-us-tensions-put-nuclear-war-back-in-the-spotlight/.

[30] All these numbers came from Harvard University's Index of US Mainstream Media Ownership, part of Harvard's Future of Media project. Fox has 833,000,000, the *New York Times* has 89,757,000, CNN has 482,000,000, and the *Washington Post* has 82,500,000. Collectively, this is 1,487,257,000. To represent this data correctly, it is necessary to remember that this number may not be distinct, i.e., there may be much overlap; it represents readership vis-à-vis number of views, not individual people. But to be sure, they still have an enormous reach. For more, see "Index of US Mainstream Media Ownership," The Future of Media Project, Institute for Quantitative Social Science (IQSS), Harvard University, May 11, 2021, https://projects.iq.harvard.edu/futureofmedia/index-us-mainstream-media-ownership.

influential newspaper,[31] Peng (2004) finds that coverage of China has been "consistently negative but increasingly frequent as China became an economic powerhouse."[32]

Most importantly (and alarmingly), popular opinion appears to align with the media's threat inflation.[33] While this correlation does not necessarily equal causation, a corpus of twenty-first-century research supports that media has a significant influence on shaping public opinion in the domain of foreign policy.[34] With this established, the dire tilt in public opinion that has happened lately merits sharp attention. In June 2021, a poll by the Pew Research Center found the following:

> Today, 67% of Americans have "cold" feelings toward China on a "feeling thermometer," giving the country a rating of less than 50 on a 0 to 100 scale. This is up from just 46% who said the same in 2018. The intensity of these negative feelings has also increased: The share who say they have "very cold" feelings toward China (0-24 on the same scale) has roughly doubled from 23% to 47%.[35]

On the whole, we have seen a "momentous shift" in American public attitudes toward China in recent years.[36] Strong majorities are now perceiving threats from China, ranging from cyberattacks, a growing military, and technological power to human rights violations and the loss of American jobs.[37] This general-level disapproval and concern over Chinese conduct lends itself

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[31] Junming Huang, Gavin G. Cook and Yu Xie, "Large-scale quantitative evidence of media impact on public opinion toward China," *Humanities and Social Sciences Communications* 8 (July 2021).
[32] Junming Huang, Gavin G. Cook and Yu Xie, "Large-scale quantitative evidence of media impact on public opinion toward China," *Humanities and Social Sciences Communications* 8 (July 2021), 1.
[33] Work from the Brookings Institute clarifies, "Although public opinion rarely determines the specifics of U.S. foreign policy, it typically defines the zone within which policies with public visibility can be sustained over time." See William A. Galston, "A momentous shift in US public attitudes toward China," *The Brookings Institution,* March 22, 2021, https://www.brookings.edu/blog/order-from-chaos/2021/03/22/a-momentous-shift-in-us-public-attitudes-toward-china/. See also Sanger and Broad, "As China Speeds Up Nuclear Arms Race."
[34] Matthew A. Baum and Philip B.K. Potter, "The Relationships Between Mass Media, Public Opinion, and Foreign Policy: Toward a Theoretical Synthesis," *Annual Review of Political Science* 11, no. 1 (2008), 39-65 and Huang, Cook and Xie, "Large-scale quantitative evidence of media impact."
[35] "Most Americans Have 'Cold' Views of China. Here's What They Think About China, In Their Own Words,"Pew Research Center, June 30, 2021, https://www.pewresearch.org/global/2021/06/30/most-americans-have-cold-views-of-china-heres-what-they-think-about-china-in-their-own-words/ and https://www.pewresearch.org/fact-tank/2021/03/04/in-their-own-words-what-americans-think-about-china/.
[36] Galston, "A momentous shift in US public attitudes."
[37] Galston, "A momentous shift in US public attitudes."

quite easily to predispositions about current nuclear tensions — including who is culpable. For this reason, it is critical that we fit these measurements of general, negatively-valenced public opinion on China into the broader picture of threat inflation.

Government and Defense Statements

Sources affiliated with the US government have an even worse record than the media, with the most aggressive and anti-cooperation posture on China seen in recent history being that under the Trump administration. By 2018, US policy had become "increasingly zero-sum, unilateralist, protectionist, and nativist," rooted in the Trump-coined attitude of "America first."[38] President Trump's erratic Chinese foreign policy went on to feature chaos, competition, and threats, including a counterproductive trade war against Chinese President Xi Jinping and persistent Sinophobic rhetoric and finger-pointing during (and for the origin of) the COVID-19 pandemic.[39]

Fear surrounding China was not limited to governance under the Trump administration, however. In April 2021, Admiral Charles Richard, the head of US Strategic Command, told the Senate, "I can't get through a week without finding out something I didn't know about China," claiming that China's "very opaque" nuclear policy makes it "difficult to determine their intentions."[40] In September 2021 talks with Chinese diplomacy, Secretary-General Jens Stoltenberg of US-led NATO expressed concern over China's "coercive policies, expanding

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[38] David Dollar, Ryan Hass, and Jeffrey A. Bader, "Assessing U.S.-China relations 2 years into the Trump presidency," *The Brookings Institution*, January 15, 2019, https://www.brookings.edu/blog/order-from-chaos/2019/01/15/assessing-u-s-china-relations-2-years-into-the-trump-presidency/.

[39] "Trump's Foreign Policy Moments, 2017–2021," Council on Foreign Relations, https://www.cfr.org/timeline/trumps-foreign-policy-moments.

[40] Patrick Tucker, " US Nuclear Fears Are Shifting From a Clear Russian Threat to a Murkier Chinese One," *Defense One*, April 20, 2021, https://www.defenseone.com/threats/2021/04/us-nuclear-fears-are-shifting-clear-russian-threat-murkier-chinese-one/173501/.

nuclear arsenal and lack of transparency on its military modernization."[41] Finally, in 2022, despite the fact that Biden campaigned on a deterrence-based posture instead of war-fighting, scholarship from the Carnegie Endowment for International Peace in Beijing supports that the current tense climate and arms race mean that the US "has no reason to impose further restrictions on its nuclear policy."[42] This would include the adoption of a "No First Use" (NFU) nuclear weapons policy, which China has maintained for decades and which the US refuses to utilize.[43]

Moreover, the notion of extended deterrence in Taiwan continues to circulate among government sources, presented as a reason for why China represents a major threat to US interests and nuclear stability — and as a justification for further development of American nuclear capabilities. Extended deterrence, a part of the US security policy in Asia for decades,[44] is essentially "the threat to use strategic nuclear weapons to protect allies."[45] This surfaces as a major question in Taiwan; the Chinese government claims it to be part of Chinese territory, a point upon which the Taiwanese government vehemently disagrees.[46] The US has thus far been maintaining so-called strategic ambiguity to informally support Taiwan while formally endorsing China's "one China" unification stance.[47] Yet the question of how far the US's informal support

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[41] "China, NATO officials discuss Afghanistan, regional tensions," Associated Press, September 27, 2021, https://apnews.com/article/china-afghanistan-beijing-taliban-wang-yi-ac491ce93182cc20bf63da23066afa36 and "Wang Yi Meets with NATO Secretary General Jens Stoltenberg at Request via Video Link," Embassy of the People's Republic of China in the United States of America, September 28, 2021, http://www.china-embassy.org/eng/zgyw/202109/t20210928_9574452.htm.

[42] See "Restraint or strength? Which nuclear option will Biden take to tackle China?", Yahoo News, January 9, 2022, https://www.yahoo.com/video/restraint-strength-nuclear-option-biden-093000531.html.

[43] The concept of "No First Use" (NFU) will be explained in-depth in a later section of this thesis — see the Part II subsection titled "Chinese Nuclear Policy: 'No First Use.'"

[44] Richard C. Bush, "The U.S. Policy of Extended Deterrence in East Asia: History, Current Views, and Implications," *The Brookings Institution,* February 2011, https://www.brookings.edu/wp-content/uploads/2016/06/02_arms_control_bush.pdf.

[45] Robert Jervis, *The Meaning of the Nuclear Revolution* (Cornell University Press: 1989), 20. Notably, Jervis approaches the idea of extended deterrence as a possibility and sometimes a problem, not as a cut-and-dry solution.

[46] Lindsay Maizland, "Why China-Taiwan Relations Are So Tense," *CFR*, May 10, 2021, https://www.cfr.org/backgrounder/china-taiwan-relations-tension-us-policy.

[47] Maizland, "Why China-Taiwan Relations Are So Tense," *CFR*.

for Taiwan will go is brought into stark relief by nuclear tensions. In particular, the discourse claims that the US commitment to protecting Taiwan, even to nuclear proportions, is a test of how credible US extended deterrence really can be. Elbridge Colby, former Deputy Assistant Secretary of Defense for Strategy and Force Development, puts it plainly: "If China could take Taiwan, it would have a massive blow to our credibility.[48] This type of thinking further reflects the linkages between anti-China sentiment and the alleged need to revamp US nuclear capabilities.

With this narrative of Chinese culpability — or least American innocence — nearly ubiquitous among American media, public opinion, and government rhetoric, how does this compare with the *reality* of what has instigated and what is now escalating the Sino-American clash?

Part II – Actual Nuclear Policy: American Madness sans MAD and National Missile Defense (NMD)

It is true that over the last two decades, we have seen a marked, mounting increase in bilateral tensions and competition across multiple dimensions between the US and China.[49] On the whole, the two states' relationship since the turn of the century has the backdrop of dramatic increases in China's economic, military, and diplomatic influence paired with a relative decline in America's.[50] Tensions initially spiked with China's astounding economic performance and growth spurt at the end of the aughts, with talk of the Chinese economy eventually surpassing the

[48] Elbridge Colby, interview by Clay Travis and Buck Sexton, *The Clay Travis and Buck Sexton Show,* October 20, 2021, https://www.clayandbuck.com/elbridge-colby-strategizes-about-defending-taiwan/.
[49] Caitlin Talmadge, "The US-China nuclear relationship: Why competition is likely to intensify," *The Brookings Institution*, September 2019, https://www.brookings.edu/research/china-and-nuclear-weapons/.
[50] Michael Lumbers, "Whither the Pivot? Alternative U.S. Strategies for Responding to China's Rise," *Comparative Strategy* 34, no. 4 (2015), 311, https://doi.org/10.1080/01495933.2015.1069510.

US to make the rising state a global economic powerhouse.[51] This discourse has sustained itself on China's increasingly assertive behavior abroad, especially seen in its aggressive foreign policy toward some of its immediate Asian neighbors.[52]

In all, China's publicized aspirations of becoming the Asian regional hegemon (which is arguably already is)[53] have concerned the US as the established North American regional hegemon. Many have come to see the bilateral relationship as moving toward a "strategic rivalry with the real potential for conflict," with an enormous focus on nuclear capabilities as the ultimate apex of great power conflict in the nuclear era.[54] This has all been compounded by the very-much-real arms race in which the US, China, and Russia have engaged in recent years, seen plainly in recent American estimations of the defense capabilities and nuclear modernization/development plans for each state.[55]

But this is where the truth begins and ends. The reasons why the US finds itself in a looming nuclear-tipped standoff with China are found at home, not abroad. On this point, this thesis finds that it is the US military who is pursuing destabilizing nuclear policies, specifically NMD,[56] provoking China's new nuclear developments in an effort to maintain deterrence. Following the previous sections' exposition of American popular rhetoric surrounding nuclear tensions with China in recent years, it is both logical and imperative to evaluate both the US and

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[51] In terms of GDP per capita, the "rise" discourse is grounded in discussions about China's *growth rate,* not China's *absolute growth* itself — although their absolute development has too been formidable.
[52] Louisa Lim and Frank Langfitt, "China's Assertive Behavior Makes Neighbors Wary," *NPR*, November 2, 2012, https://www.npr.org/2012/11/02/163659224/chinas-assertive-behavior-makes-neighbors-wary.
[53] See John J. Mearsheimer, *The Tragedy of Great Power Politics (updated edition)* (W. W. Norton and Company, 2001) for a discussion of regional versus global hegemony.
[54] Lumbers, "Whither the Pivot?", 311.
[55] For American modernization plans, see the "2018 National Security Strategy [2018 NSS]" US Department of Defense (2018). For American estimations of China's and Russia's, see the "Military and Security Developments Involving the People's Republic of China," US Department of Defense (2020) and "Russia's Nuclear Weapons: Doctrine, Forces, and Modernization," Congressional Research Service (2022).
[56] In addition to NMD, new war-fighting weapons are part of the US's modernization program and general doctrine. However, for the purpose of scope, only NMD will be evaluated in this thesis. See the 2018 NPR for more on nuclear war-fighting and the US pursuit of tactical weapons.

China's actual nuclear policy from this same timeframe. The evidence, grounded in verified posture- and capabilities-related documents from the Department of Defense on both the US and China, reveals the extent to which depictions of China represent utter threat inflation rather than true threats, further supporting that the US is responsible for current tensions. This will segue into an overview of nuclear deterrence theory, discussed in order to contextualize the evidence and ultimate argumentation against NMD.

Chinese Nuclear Policy: "No First Use"

As described by this title, the consistent bottom line of China's nuclear policy for the last almost six decades has been and continues to be unconditional "No First Use" (NFU). The Arms Control Center defines NFU as a policy that works to "formalize that nuclear weapons are only for deterrence, not nuclear war-fighting" by ensuring that the state does not use nuclear weapons first in a crisis.[57] In fact, China was the first state to suggest and then adopt an NFU policy, which it has consistently done since it first developed nuclear weapons in 1964.[58] This position is frequently affirmed by Chinese officials, both diplomatic and military, with a significant recent example found in a July 2019 Ministry of Defense white paper on national defense that again upheld NFU in both rhetoric and policy.[59] Even more recently was a conference in January 2022 where diplomats from China, the US, the UK, France, and Russia discussed the Non-Proliferation Treaty (NPT).[60] Fu Cong, the director-general of the Chinese Foreign Ministry's department of arms control, said that Beijing "remained committed to a policy of no first use and deterrence, despite modernizing its nuclear capabilities."[61] When asked about

[57] "China," Center for Arms Control and Non-Proliferation, https://armscontrolcenter.org/countries/china/.
[58] "No-First-Use Policy Explained," Union of Concerned Scientists [UOCS], May 7, 2020, https://www.ucsusa.org/resources/no-first-use-explained.
[59] "No-First-Use Policy Explained," UOCS.
[60] Brad Lendon and Jessie Yeung, "China, US, UK, France and Russia pledge to avoid nuclear war," *CNN*, January 4, 2022, https://www.cnn.com/2022/01/04/world/p5-nations-nuclear-pledge-intl-hnk/index.html.
[61] Lendon and Yeung, "China, US, UK, France and Russia pledge."

tensions over Taiwan — one of the major flashpoints in Sino-American tensions, as China has pursued the "One China" principle and the US has striven to maintain strategic ambiguity[62] — Fu said,

> Nuclear weapons are the ultimate deterrence. They are not for war fighting. By saying that nuclear war cannot be won and must never be fought shows that this is an understanding shared by all the [UN Security Council's] P5. So it is important that we have this in mind while we talk about the tension. … This applies everywhere and it applies with our bad relations with the US … This is something that *we hope could reduce tension, and it would help clarify certain misunderstandings* (emphasis my own).[63]

Meanwhile, the US remains a black sheep. As of an October 2021 report from the Congressional Research Service, the US "has pledged to refrain from using nuclear weapons against most non-nuclear-weapon states, but has neither ruled out their first use in all cases nor specified the circumstances under which it would use them."[64] The US still refuses to adopt an NFU policy, tactically pursuing the opposite, while China remains committed to nuclear deterrence and the implausibility of the world surviving a nuclear war in both words and actions The dichotomy here is crystal clear, further underlined by the fact that China only has around 350 nuclear warheads, with weapons kept on low alert (warheads and missiles stored separately);[65] meanwhile, the US has close to 3,600, with weapons on hair-trigger alert.[66]

On the topic of the recent nuclear developments by China that are the alleged root of the increased "threat," renowned scholars of international relations, nuclear deterrence, and atomic sciences are in agreement that essentially all of them are direct reactions to the US's attempts to establish NMD. Security studies and proliferation researchers George Lewis and Frank von

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[62] Lindsay Maizland, "Why China-Taiwan Relations Are So Tense," CFR Backgrounder, *Council on Foreign Relations*, May 10, 2021, https://www.cfr.org/backgrounder/china-taiwan-relations-tension-us-policy.
[63] Lendon and Yeung, "China, US, UK, France and Russia pledge."
[64] Lendon and Yeung, "China, US, UK, France and Russia pledge."
[65] "China," Center for Arms Control and Non-Proliferation.
[66] "Frequently Asked Questions about Taking Nuclear Weapons Off Hair-Trigger Alert," UOCS, January 2015, https://www.ucsusa.org/sites/default/files/attach/2015/01/Hair-Trigger%20FAQ.pdf.

Hippel present incisive examples of this. Regarding China's "MIRVing" of ICBMs (with "MIRVed" weapons to be more closely examined in a later section), they say, "China's development of ICBMs with multiple warheads is widely viewed as, at least in part, a response to the US ballistic missile defense program."[67] Chinese hypersonic ballistic missiles are likewise designed to bypass missile defense systems that use radar, like THAAD,[68] and would logically not be necessary otherwise. Ultimately, Chinese policies reflect a consistent and reasonable desire to avoid fighting a nuclear war with the US and to maintain MAD. This does not discount nor excuse China's aggressive behavior abroad and repressive behavior at home, nor does it mean that Sino-American competition is any less real and intense. But just because we see aggressive behavior with China across some dimensions of security does not mean that this is happening across every dimension of security, including nuclear ones.

US Nuclear Policy: "The Four Horsemen"

In shifting toward the US, an investigation of American nuclear policies and posturing positively illuminates how the US has been pursuing neither a peaceful nor cooperative relationship with China. Instead, the most prominent nuclear policy documents produced and published by the Department of Defense in the last several years have come to illustrate an entirely different focus than all of their counterparts since the end of the Cold War; they reflect an explicit shift toward great power competition and nuclear primacy, citing the tactical use of nuclear weapons and NMD, and openly rejecting a true nuclear deterrence posture.

Documents of this type that were produced between 2016 and 2020 under the Trump administration remain the most aggressive and war-oriented of all. Four documents in particular

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[67] George Lewis and Frank von Hippel, "Limitations on ballistic missile defense — Past and possibly future," *Bulletin of the Atomic Scientists* 74, no. 4 (2018), 204, https://doi.org/10.1080/00963402.2018.1486575.
[68] "2019 Missile Defense Review [2019 MDR]," US Department of Defense, https://media.defense.gov/2019/Jan/17/2002080666/-1/-1/1/2019-MISSILE-DEFENSE-REVIEW.PDF.

— the 2017 National Security Strategy, the 2018 National Defense Strategy, the 2018 Nuclear Posture Review, and the 2019 Missile Defense Review[69] — may as well symbolically comprise the four horsemen of the nuclear apocalypse.

The ball starts rolling slowly with the 2017 National Security Strategy (NSS). Mandated since 1986,[70] it serves to communicate the national security vision of the executive branch to the legislative branch, and it must include "a discussion of the United States' international interests, commitments, objectives, and policies, along with defense capabilities necessary to deter threats and implement U.S. security plans."[71] In the 2017 NSS, the very first listed objective in the entire, nearly 70-page document is "Enhance Missile Defense."[72] Under the title "Priority Actions," it explicitly says that the US is pursuing a "layered missile defense system" focused on North Korea and Iran,[73] but "[e]nhanced missile defense is not intended to undermine strategic stability or disrupt longstanding strategic relationships with Russia or China."[74] Assuming that this is referring to regional missile defense systems like Aegis, THAAD, and Patriot,[75] we may still be in the "safe" zone;[76] regional missile defenses undermine MAD far less than their national counterpart due to their geographically limited scope. Even with regional protection, a

[69] The 2019 Missile Defense Review (MDR) directly states that it "is consistent with the 2017 NSS, the 2018 National Defense Strategy (NDS), and the 2018 Nuclear Posture Review (NPR), seen in 2019 MDR, Department of Defense, 1.
[70] "National Security Strategy," Historical Office, Office of the Secretary of Defense, https://history.defense.gov/Historical-Sources/National-Security-Strategy/.
[71] https://history.defense.gov/Historical-Sources/National-Security-Strategy/
[72] "2017 National Security Strategy [2017 NSS]," US Department of Defense, https://history.defense.gov/Historical-Sources/National-Security-Strategy/.
[73] 2017 NSS, Department of Defense, 8.
[74] 2017 NSS, Department of Defense, 8.
[75] 2019 MDR, Department of Defense.
[76] Another highlight includes, "China and Russia challenge American power, influence, and interests, attempting to erode American security and prosperity. They are determined to make economies less free and less fair, to grow their militaries, and to control information and data to repress their societies and expand their influence." See 2017 NSS, Department of Defense, 2.

full nuclear strike from another nuclear state could still easily destroy an unacceptable level of life and industry in US territory,[77] and so MAD remains sufficiently intact.

However, we see the unclassified synopsis 2018 National Defense Strategy (NDS),[78] published to illustrate the DoD's role in implementing the NSS documents discussed above, take a much darker turn. From the beginning, it asserts that the US is now emerging from a period of "strategic atrophy;" the second sentence of the entire document writes, "Should deterrence fail, the Joint Force is prepared to win"[79] — presumably, "win" a nuclear war. It claims that the new central challenge to American security is "the *reemergence of long-term, strategic competition* by what the National Security Strategy classifies as revisionist powers" (emphasis original),[80] naming these as China and Russia. The word "competition" and its equivalent word forms are mentioned a total of 41 times in just 14 pages, 39 of these referencing this idea of international competition.[81]

And yet if there were a single document that could encapsulate the utter senselessness and danger of the US government's contemporary nuclear policy in its entirety, it would be the 2018 Nuclear Posture Review (NPR). Published in January and just a few weeks after the 2018 NDS, the 2018 NPR outlines the most war-centric and destabilizing nuclear posture taken by the US in recent history. In 100 pages, this legislatively mandated review on updated US nuclear policy, strategy, capabilities and posture claims that "global threat conditions have worsened

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[77] Any loss of life from a real-life nuclear strike is guaranteed to be "unacceptable." However, the literature uses this type of language to reflect the point of view of states as strategic actors who must still evaluate "unacceptable" options, and so when in Rome, evaluate nuclear war as the Romans do.
[78] The NDS focuses on the Department of Defense's role in implementing the President's National Security Strategy (NSS). Moreover, it is required to discuss "the global strategic environment, force posture, and the role of the US in global security." See "National Defense Strategy," Historical Office, Office of the Secretary of Defense, https://history.defense.gov/Historical-Sources/National-Defense-Strategy/.
[79] "2018 National Defense Strategy [2018 NDS]," US Department of Defense, 1, https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf.
[80] 2018 NDS, 1.
[81] 2018 NDS, 1.

markedly" since 2010, including "increasingly explicit nuclear threats from potential adversaries,"[82] and that "[f]or the first time in 25 years, the United States is facing a return to great power competition."[83] The document largely focuses on nominally supporting deterrence, but both nominally and tactically supporting entirely destabilizing nuclear policies. This NPR's explanation of the pursuit of missile defense is best summarized by the following excerpt:

> The goal of limiting damage if deterrence fails in a regional contingency calls for robust adaptive planning to defeat and defend against attacks, including missile defense and capabilities to locate, track, and target mobile systems of regional adversaries. These and other non-nuclear capabilities, which we are now strengthening, can complement but not replace U.S. nuclear forces for this purpose. In the case of missile threats from regional actors in particular, U.S. missile defense and offensive options provide the basis for significant damage limitation in the event deterrence fails.[84]

While this essay has only the scope to focus on US missile defense, the 2018 NPR also lists a wide variety of so-called low-yield nuclear options, intended for *tactical* and not *strategic* use. It claims that its expansion of low-yield options "is not intended to, nor does it enable, 'nuclear war-fighting.'"[85] However, this statement rings extraordinarily hollow when embedded in a 100-page document on nuclear capabilities that pertain specifically to tactical options during a limited nuclear war.[86]

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[82] 2018 NPR, Department of Defense, v.
[83] 2018 NPR, Department of Defense, 5.
[84] 2018 NPR, Department of Defense, 23.
[85] 2018 NPR, Department of Defense, xii.
[86] For more on the details of how the US should fight such a war, see Elbridge Colby, "If You Want Peace, Prepare for Nuclear War: A Strategy for the New Great-Power Rivalry," *Foreign Affairs* 97, no. 6 (Nov/Dec 2018), 25–32. This is perhaps one of the most astonishing takes available on this topic, entirely departing from the security studies literature to argue that in order to deter great powers like China, US strategy "requires conventional military power, but it also means having the right strategy and weapons to fight a limited nuclear war and come out on top" (p. 25). Colby goes on to explain his reasoning for why the US should be prepared to "bridge the gap" between conventional and nuclear options and ultimately fight a so-called limited nuclear war. Another quote worth displaying is as follows: "The risks of nuclear brinkmanship may be enormous, but so is the payoff from gaining a nuclear advantage over an opponent. Nuclear weapons are, after all, the ultimate trump card: if you can convince your enemy that you have a way to play the card and are actually prepared to go through with it, nothing is more powerful. And the best way to do that is to have palatable options for the limited and effective use of nuclear weapons" (Colby, p. 29). Let it be established that this argumentation is dangerous, war-mongering, and inconsistent with the rest of the literature. Despite this, it is essential to remember that Colby was the US Deputy Assistant Secretary of Defense for Strategy and Force Development from 2017-2018; this is hardly small potatoes. Evidently, these views in support of preparation for limited nuclear war are being propagated by incredibly high-ranking officials, and their influence over both policy and public perception should not be taken lightly.

The remaining 2019 Missile Defense Review (MDR) closes the coffin. Explicitly stating that it is consistent with the previous three documents,[87] it claims to "integrate offensive and defensive capabilities for deterrence,"[88] predominantly focused on the details of national ground-based anti-ballistic missile defense (NMD). Highlights include sections with titles like "Missile Defenses are Stabilizing" and descriptions of a "threat environment [that] is markedly more dangerous than in years past."[89] Notably, there remains a gaping lack of information about any *tangible successes* of current NMD programs, with the language instead discussing possibilities for development. This is, in fact, in large part due to the overwhelming failures of the kill vehicles, which will be discussed later in this section (see Figure 2).

From MAD to NUTS

The US Department of Defense's forthcoming 2022 NDS, not yet published at the time of this writing but slated for early 2022, may show a radical change of strategy, posture, and plans. However, a late-2021 news briefing on the forthcoming 2022 NDS states, "The DOD has recognized China as its pacing threat, a topic that was included in the 2018 National Defense Strategy, and China remains a challenge that is growing ever more acute…" and "[t]he new NDS will get after the China challenge while ensuring that the DOD is responsibly working with its closest allies and partners… ."[90] Moreover, in December 2021, Undersecretary of Defense for Policy Colin Kahl said that "[t]he nuclear deterrent remains important" and that continuing to

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[87] The exact quote in the 2019 MDR is as follows: "This 2019 *Missile Defense Review* (MDR) is consistent with the 2017 NSS, the 2018 *National Defense Strategy* (NDS), and the 2018 *Nuclear Posture Review* (NPR)." See 2019 MDR, Department of Defense, i.
[88] 2019 MDR, Department of Defense, i.
[89] 2019 MDR, Department of Defense, vi. The rationale is as follows: "Missile defense capabilities provide the U.S., allies, and partners the ability to prevent or limit damage from an adversary offensive missile strike. They provide an additional option to offensive strikes to prevent damage to the United States, deployed forces, allies, and partners."
[90] Terri Moon Cronk, "DOD Official Outlines 2022 National Defense Strategy in CNAS Forum," *DoD News,* December 10, 2021, https://www.defense.gov/News/News-Stories/Article/Article/2869837/dod-official-outlines-2022-national-defense-strategy-in-cnas-forum/.

modernize the nuclear triad will ensure a "safe, secure and effective nuclear deterrent as the ultimate backstop… But we'll also develop additional capabilities."[91] Presumably, these "additional capabilities" include the pursuit of missile defense, as there has been the last twenty years.

Regardless, the conclusions from these four published documents from the US Department of Defense are clear. For the first time in close to three decades, the US nuclear doctrine has changed from second-strike to first-strike forces. We have shifted from nuclear deterrence to nuclear war-fighting with missile defense, from rogue states to "strategic long-term competition" with other great powers, and from respecting MAD to preparing for "limited" nuclear war.[92]

It is essential to emphasize that the US's recent nuclear posture, while new relative to the last thirty years, is not based on altogether new ideas. Rather, it pivots on ideas that are relics from the Cold War — rightfully replaced by more stable policies, but now dragged out of retirement and back into American missile silos, undersea submarines, and bomber fleets. Perhaps the most salient historical example of when the US's nuclear doctrine still considered nuclear war-fighting is the leaked and highly controversial "Nuclear Targeting" Presidential Directive 59 (PD-59) from President Carter's administration.[93] Its key sections leaked in July 1980,[94] PD-59 reflected the same underlying ideas of the 2018 NPR in its support for tactical-use

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[91] Jim Garamone, "Concept of Integrated Deterrence Will Be Key to National Defense Strategy, DOD Official Says," *DoD News,* December 8, 2021, https://www.defense.gov/News/News-Stories/Article/Article/2866963/concept-of-integrated-deterrence-will-be-key-to-national-defense-strategy-dod-o/.
[92] 2018 NPR, Department of Defense.
[93] William Burr, "Jimmy Carter's Controversial Nuclear Targeting Directive PD-59 Declassified," *National Security Archive Electronic Briefing Book No. 390*, George Washington University, September 14, 2012, https://nsarchive2.gwu.edu/nukevault/ebb390/.
[94] Burr, "PD-59 Declassified."

nuclear weapons. Generally oriented around "more flexibility in planning for and executing a nuclear war," it included a pre-planned option for launch-on-warning nuclear weapons.[95]

Thankfully, the following Reagan administration did not act on PD-59, despite President Reagan's vigorous and quixotic pursuit of missile defense via space lasers, titled Strategic Defense Initiative (SDI) and mocked as "Star Wars."[96] With some ups and downs but with a general trend toward nuclear deterrence, at least up until the US's departure from the ABM in 2002, policy has generally aligned with deterrence. In 1984, both President Reagan himself and then-Secretary of Defense James Schlesinger acknowledged this, with the former announcing, "A nuclear war can never be won and must never be fought"[97] and the latter, "There is no realistic hope that we shall ever again be able to protect American cities. There is no leakproof defense."[98]

However, the ideas of PD-59 have evidently lived on. As we now see serious discourse surrounding nuclear war-fighting and NMD reemerging, scholarship from earlier eras on the paradigm shift from nuclear deterrence to nuclear war-fighting is once more urgently relevant. In a brilliant 1981 paper, disarmament scholar Spurgeon Keeny, Jr. and Stanford physics professor Wolfgang Panofsky write of the dangers of discarding MAD, sardonically coining the (then-new)

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[95] PD-59 also sought the following: "If deterrence failed, the United States 'must be capable of fighting successfully so that the adversary would not achieve his war aims and would suffer costs that are unacceptable.' To make that feasible, PD-59 called for "pre-planned nuclear strike options and capabilities for rapid development of target plans against such key target categories as 'military and control targets,' including nuclear forces, command-and-control, stationary and mobile military forces, and industrial facilities that supported the military. Moreover, the directive stipulated strengthened command-control-communications and intelligence (C3I) systems.'" It drew from PD-18 as well, which sought the capacity for "limited strategic [nuclear] employment options." See https://nsarchive2.gwu.edu/nukevault/ebb390/ for more.

[96] Lewis and von Hippel, "Limitations on ballistic missile defense," 201.

[97] "No First Use," Center for Arms Control and Non-Proliferation, https://armscontrolcenter.org/issues/no-first-use/.

[98] Arms Control Association, *Foundation for the Future: The ABM Treaty and National Security* (book), p. 4

war-fighting paradigm as "NUTS" ("Nuclear Use Target Selection").[99] Forty years later, we have again gone from MAD to NUTS, and new US policies reflect it.

When Policy Defies Technological Reality: NMD

In order to understand and explain how the US's nuclear policy and pursuit of NMD have been restarting the arms race and igniting a new cold war with China, it is essential to first explain how missile defense undermines the theoretical underpinnings of nuclear deterrence itself. Such a contextualization and consequent analysis is made possible by nuclear deterrence theory.

The Fundamentals of Nuclear Deterrence Theory and MAD

At its core, nuclear deterrence theory explains how nuclear weapons, in their capacity for ultimate destruction, can actually deter war altogether and lead to peace. In a world where states are armed with civilization-ending weapons, to attack your nuclear-armed adversary means to invite an attack in response. This is because such a conflict, even if it begins with only conventional weapons, always has the potential to escalate to nuclear proportions. A subsequent, full-scale nuclear war would result in the utter annihilation of both states at minimum, with deadly radioactive fallout and nuclear winter likely to follow shortly thereafter. In short, a single launched nuke could trigger a response of thousands more, ending the world as we know it, both symbolically and literally.

Paradoxically, nuclear weapons' capacity for global destruction is the same mechanism that underlies their capacity to bring about global peace. The outcome of nuclear war is so

[99] Spurgeon M. Keeny Jr. and Wolfgang K. H. Panofsky, "Mad versus Nuts: Can Doctrine or Weaponry Remedy the Mutual Hostage Relationship of the Superpowers?" *Foreign Affairs* 60, no. 2 (Winter, 1981), 304, https://news.stanford.edu/news/2007/april18/pief-041807.html. The authors entirely agree with the dangers of discarding MAD, and they conclude that, "What is clear above all is that the profusion of proposed NUTS approaches has not offered an escape from the MAD world, but rather constitutes a major danger in encouraging the illusion that limited or controlled nuclear war can be waged free from the grim realities of a MAD world. The principal hope at this time will not be found in seeking NUTS doctrines that ignore the MAD realities but rather in recognizing the nuclear world for what it is and seeking to make it more stable and less dangerous."

catastrophic that nuclear states are generally deterred from taking actions that could even begin to precipitate the possibility of such a war.[100] Universal recognition that to pursue such an outcome is beyond irrational for states that want to survive, a principle called Mutually Assured Destruction (MAD), is what underlies the effectiveness of deterrence.[101]

Modeled using the framework of game theory, MAD is a form of Nash equilibrium in which nuclear states have neither the incentive to attack nor disarm. To attack is to violate the understanding that nuclear war would cause intolerable collateral damage to all civilizations involved; to disarm is to give up the ultimate form of protection from such an attack and confer an advantage to a still-nuclear opponent. What ultimately emerges from this pairing is the understanding that nuclear war would cause intolerable collateral damage to all civilizations involved, with major implications for how nuclear states weigh the costs versus benefits of starting a war: conquest no longer pays, and wars are no longer "winnable." This culminates in a "crystal ball effect" in which states can more clearly see outcomes in a conflict, reducing uncertainty and the potential for miscalculation.[102]

This is why an ubiquitous recognition of MAD, coupled with nuclear policies that align with it, allows states to escape the security dilemma *and* maintain credible deterrence. When the

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[100] Security studies scholars disagree over the exact requirements for establishing deterrence. Waltz argues that it requires the ability to inflict "unacceptable damage on another country," to deploy survivable second-strike forces, and to respond if attacked. Waltz also outlines three more detailed requirements for deterrence: 1) at least a part of the state's nuclear forces must appear to be able to survive an attack and launch one of its own, 2) survival of forces must not require early firing in response to what may be false alarms, and 3) command and control must be reliably maintained so that weapons are not susceptible to accidental or unauthorized use. Sagan asserts that the first state to acquire nuclear weapons must not engage in preventive war with a second, that new nuclear powers must build survivable second-strike forces, and nuclear arsenals cannot be prone to accidental nor unauthorized use. See Waltz and Sagan, *The Spread of Nuclear Weapons*, 21.

[101] Like the minimum requirements for establishing deterrence, those required for MAD are also contested. But again, Waltz's assertion that "Deterrence requires the ability to inflict unacceptable damage on another country" is the bottom line on both MAD and deterrence. See Waltz, *The Spread of Nuclear Weapons,* 21.

[102] Nuclear weapons make military miscalculations become more difficult, as nuclear war makes predictions about outcomes far more certain — the "crystal ball" effect. From Albert Carnesale, et al., *Living with Nuclear Weapons* (Bantam Books, 1983), 44: "This crystal ball effect helps give the nuclear world at least some measure of stability. Statesmen in the atomic age can envision the destruction of a full-scale nuclear war and it makes them determined to avoid it." Also see Waltz's later use of this metaphor.

fear of being attacked back is sufficient to prevent attacking in the first place, and this is understood clearly and taken seriously by both sides, it precludes the possibility of states rationally instigating nuclear war. Hence, MAD's universal recognition, paired with mutually compatible security policies that align with its principles, could bring the great powers closer to world peace than any other single factor present in the international system. Inversely, nuclear policies that erode MAD correspondingly erode a stable nuclear world, and none present a better example than NMD.

MAD remains a fact, not a policy.[103] Yet as evidenced, the conditions that support stable MAD must be maintained by policy. Nuclear states cannot simply pursue any type of capabilities they wish and expect to maintain their own security while not threatening the security of others. The US is no exception to this rule, yet state nuclear policy reflects American exceptionalism to the nth degree. This leads us to the crux of the issue regarding the US's pursuit of national missile defense: violation of the theoretical underpinnings of nuclear deterrence and MAD.

The Problem with NMD as Nuclear "Defense"

The term "defense" in the context of national missile defense is highly misleading because it connotes a degree of safety, protecting territory from another state's offensive strike. Yet in the paradoxical world of MAD, missile defense is far more dangerous than no defense at all. The following table aims to preface this discussion by clearly delineating the differences between war-fighting and deterrence regarding nuclear weapons capabilities.

Figure 1: Categorizing Nuclear Weapons Terminology

Domain of Comparison	Nuclear War-fighting	Nuclear Deterrence
Premise	*States can fight nuclear wars and*	*States can never fight nuclear wars*

[103] Robert Jervis, *The Meaning of the Nuclear Revolution* (Cornell University Press: 1989).

	meaningfully win; they need to have tactical (often called "low-yield") and offensive first-strike weapons to hit military targets.	*because they cannot "win;" they need to deter others from ever striking.*
Doctrine	First-strike forces *Hit first before opponent launches*	Second-strike forces *Hit second after opponent launches*
Target	Counterforce *Targeting threats — specific targets identified for military strategic purposes; requires highly complex technology, operations, and accuracy*	Countervalue *Targeting non-threats — major cities and/or centers of industry; remains stable over time and requires simple strategies*
Offense, defense, or deterrence?	Can include both offense and defense *Offense:* tactical, low-yield, etc. first-strike weapons targeting counterforce *Defense*: regional or national missile defense systems against nuclear strikes	Only includes deterrence *Deterrence:* survivable, credible, and controlled second-strike forces targeting countervalue
Conducive to MAD?	No *Threatens stable understanding of mutual annihilation by significantly increasing possibility of an offensive attack*	Yes *Supports stable understanding of mutual annihilation and enables escape from security dilemma*
Compatible with NMD?	Yes *NMD enhances capability for war-fighting (if it works) by protecting home territory from unacceptable damage from others' strikes*	No *NMD undermines deterrence (whether or not it works) by threatening others' certainty that their strikes would inflict unacceptable damage*

As seen in Figure 1 above, nuclear deterrence hinges on keeping MAD intact, and in terms of nuclear doctrine, MAD utilizes only deterrence — not offense or defense.[104] Major problems

[104] Security studies scholars agree that successful MAD (and therefore successful nuclear deterrence) requires that, among other components, second-strike forces must remain survivable. Moreover, defenses have to be clearly distinguishable from — and more effective than — offenses. Successful MAD also requires a state to have second strike capability (or at least appear to), to not require early firing on false alarms, and to contain the threats of misfires. See Waltz, *The Spread of Nuclear Weapons,* 20.

begin to multiply once a state starts trying to pursue anything but deterrence, and understanding this will be key to understanding the breakdown in clear nuclear stability between the US and China.

First, it is logical for states to want defense against nuclear weapons so they can decrease the possibility of total nuclear destruction. States seek to survive, and a nuclear strike threatens this on the most fundamental level. Yet defense against nuclear strikes, which is exactly what national missile defense seeks to do, is not technologically possible. As detailed by a now-classic video made in 2000 by the Union of Concerned Scientists (UOCS),[105] NMD will never work because it faces a) numerous cheap countermeasures and b) insurmountable logistical complications. Both will be explained in-detail later in this same section, but as a preview, simply putting multiple warheads on a single ICBM could overwhelm even the most advanced and complex ground-based missile defense systems. Given this — that missile defense cannot work — it is nonsensical to pursue NMD. Any state that does so anyway is acting irrationally. Yet if a state does choose to pursue NMD, even though they know it does not work, they still need other states to fear that it *could* work. This is because any state attempting to create a credible defense system against a nuclear strike must *act* like the system is a real threat.

This is where the real trickle-down effect begins. The other nuclear states in the international system, sans NMD, are now forced to operate under conditions of increased uncertainty. They, too, know that NMD does not work — yet the very possibility that it might, however miniscule, is destabilizing enough that they are prompted into preparing for it. In other words, in seeking to maintain their own security, they must plan for a possibly successful NMD system. These states then hurry to proliferate and develop weapons that can circumvent and/or

[105] "Missile Defense Countermeasures," UOCS, Dec 19, 2011, video, https://www.youtube.com/watch?v=gNSR7dXHdCY.

overwhelm missile defense, racing to maintain deterrence against new and uncertain capabilities. In short, even the scant possibility of functional missile defense systems is enough to trigger vertical nuclear proliferation and development. Hence, by a single state pursuing NMD, the collective security dilemma has arisen again, and the arms race with it. More than this, NMD possibly enhances first-strike capabilities if it is paired with war-fighting weapons; as seen in Figure 1 above, offense and defense paired together — as opposed to deterrence — are what enable war-fighting. By decreasing security, igniting arms races, and empowering offensive doctrines, our world is an immeasurably more dangerous place with missile defense in it.

It can be confusing to reframe the idea of national missile defense, containing the word "defense," as part of an offensive doctrine. Such a system intends to work like defense, protecting US territory by shooting down nuclear strikes, not by launching them. Yet NMD itself does not need to be an offensive weapon to be a pivotal part of an offensive doctrine. Rather, NMD is a defensive tool that *enables* the US to pursue an offensive doctrine. Part of why the pursuit of NMD is so attractive (and destabilizing) is the fact that if it worked, a nuclear state with NMD could conceivably conduct a first strike on another, eliminating as much of their nuclear power as possible — and then survive the retaliation. This translates into the incentive to be the first to start a nuclear war, which is a major part of why the ABM Treaty originally banned NMD in 1972.[106]

As established, the logic of MAD follows that global nuclear states will never wage nuclear war if they can be assured that both they and their adversaries will suffer destruction to such an extent that there is no value in "winning." However, even a *potentially* successful American national nuclear missile defense program wholly threatens this understanding between the global nuclear states, and it is directly threatening China's sense of security.

[106] *Foundation for the Future: The ABM Treaty and National Security*, Arms Control Association (1990), 4.

To be sure, NMD still does not work and will *never* conceivably work. As detailed by a now-classic video made in 2000 by the Union of Concerned Scientists (UOCS), there are numerous basic countermeasures that can overwhelm missile defense — both regional and national.[107] Cheap decoys can easily bypass NMD's kill vehicle, the mechanism intended to stop ICBMs in flight. A dozen simple, shiny Mylar balloons, each containing a battery heater to mimic a warhead's heat, could confuse GMD with ease, each reading in the system as a real warhead.[108] Another option is the bomblet approach; a missile releases a hundred or more smaller bombs, as opposed to one or two large ones, long before reaching the GMD kill vehicle, creating a cloud of bomblets more than fifteen miles across and completely overwhelming the interceptors.[109] Similar to these types of cluster-bomblets is the idea of MIRVing, and while these types of weapons are distinct, they overwhelm missile defense in a functionally equivalent way. Weapons coupled with Multiple Independently-targetable Reentry Vehicles — "MIRVed" weapons[110] — means there are multiple warheads attached to a single ballistic missile. Just like bomblets, this would overwhelm US GMD quickly, effectively, and reliably, and it also promotes vertical proliferation globally as warheads multiply in order for states to maintain deterrence.

Yet even assuming that the GMD kill vehicle could do what it is designed to is evidently a step ahead. As of August 2019, the Department of Defense terminated the GMD's Redesigned Kill Vehicle program explicitly "due to technical design problems."[111] Deploying a GMD system

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[107] Iran and North Korea, part of the government's justification for GMD in the first place, "can be expected to introduce highly effective countermeasures against … GMD, SM-3, THAAD, and possibly even Patriot," rendering these systems potentially ineffective as well. For more on how decoys could overwhelm these missile defense systems, See George N. Lewis and Theodore A. Postol, "A Flawed and Dangerous U.S. Missile Defense Plan," *Arms Control Today* 40, no. 4 (2010): 24-32.

[108] All of these examples are from "Missile Defense Countermeasures," UOCS, Dec 19, 2011, video, https://www.youtube.com/watch?v=gNSR7dXHdCY.

[109] All of these examples are from "Missile Defense Countermeasures," UOCS, Dec 19, 2011, video, https://www.youtube.com/watch?v=gNSR7dXHdCY.

[110] Adam J. Herbert, "The Rise and Semi-Fall of MIRV," *Air Force Magazine*, June 1, 2010, https://www.airforcemag.com/article/0610issbf/.

[111] For more on the Pentagon killing the kill vehicles, see Judson on the termination of this program: Jen Judson, "Pentagon terminates program for redesigned kill vehicle, preps for new competition," *Defense News*, August 21,

that is already astoundingly ineffective with non-functional kill vehicles, the essential mechanism of this type of missile defense, is beyond nonsensical. This is driven home by the results displayed in the following table from the UOCS,[112] updated with the latest information on GMD's failures:

Figure 2: Summary of Test Intercepts

Test #	**Date**	**Designation**	**Successful?**
1	10/2/1999	IFT-3	Y
2	1/18/2000	IFT-4	N
3	7/7/2000	IFT-5	N
4	7/14/2001	IFT-6	Y
5	12/3/2001	IFT-7	Y
6	3/15/2002	IFT-8	Y
7	10/14/2002	IFT-9	Y
8	12/11/2002	IFT-10	N
System is deployed			
9	12/15/2004	IFT-13C	N
10	2/14/2005	IFT-14	N
11	9/1/2006	FTG-02	N*
12	9/28/2007	FTG-03A	Y
13	12/5/2008	FTG-05	Y
14	1/31/2010	FTG-06	N
15	12/15/2010	FTG-06A	N
16	7/5/2013	FTG-07	N
17	6/22/2014	FTG-06B	Y
18	5/30/2017	FTG-15	Y
19	3/25/2019	FTG-11	Y

2019, https://www.defensenews.com/pentagon/2019/08/21/dod-tanks-redesigned-kill-vehicle-program-for-homeland-defense-interceptor/.

[112] "US Ballistic Missile Defense Timeline: 1945-Today," UOCS, published July 21, 2007 and updated March 29, 2019, https://www.ucsusa.org/resources/us-missile-defense-timeline.

The UOCS clarifies that as of 2019, the GMD system has successfully destroyed its target in ten out of nineteen attempts. This is just under a 0.53 success rate. Even if GMD had a 95% success rate, with the absolute lowest estimations of China's projected warhead count in the 200s,[113] nuclear war would still mean at least ten major US cities destroyed beyond comprehension. This is the absolute annihilation of D.C., New York City, Philadelphia, Boston, Chicago, Los Angeles, San Francisco, Seattle, Houston, and Phoenix — all gambled on odds just slightly better than a coin toss.

The Details of American NMD: The Timeline

With all of this established, it seems madness to pursue NMD. Yet that is exactly what the US is doing, and it is this pursuit that is central to the new cold war with China. Despite this, the US has been making moves to procure missile defense for about as long as the US has possessed nuclear weapons. China is simply the new stated target and justification for NMD; they were never the original inspiration. For the fine-print on exactly how the US is (and has historically been) pursuing missile defense, the best way to illustrate this is through a detailed timeline. For this reason, in the Appendix, the reader can find such a timeline from The Union of Concerned Scientists. Some of the most salient points can be found immediately below:[114]

> **1945.** Following World War II, the US Army begins planning for research and development of missile defenses. Meanwhile, US defense contractors conclude that such technology is beyond their current reach.
> **May 1972.** US and Soviet Union sign the ABM Treaty, banning nationwide missile defenses and limiting each side to two missile defense sites with no more than 100 interceptors at each site.

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[113] "Annual Report to Congress: Military and Security Developments Involving the People's Republic of China, 2020," Office of the Secretary of Defense (2020), 92. Other, more recent reports published in 2021 from non-governmental research say estimates closer to 350, which means even more destruction and at least seven more US cities annihilated with this inflated hypothetical success rate of 95%. For these estimates, see Hans M. Kristensen and Matt Korda, "Chinese nuclear forces, 2020," *Bulletin of the Atomic Scientists* 76, no. 6 (2020), 443-457, https://doi.org/10.1080/00963402.2020.1846432.

[114] "US Ballistic Missile Defense Timeline: 1945-Today," *Union of Concerned Scientists*, published July 21, 2007 and updated March 29, 2019, https://www.ucsusa.org/resources/us-missile-defense-timeline.

> **March 23, 1983.** President Reagan announces that the US will start an expanded research and development program of missile defense system which makes "nuclear weapons impotent and obsolete." His idea becomes the "Strategic Defense Initiative," or SDI. Opponents call it "Star Wars."
> **October 1986.** President Reagan and Soviet President Gorbachev discuss the complete elimination of nuclear weapons, but the proposal collapses when Reagan refuses to agree to limitations on SDI.
> **July 23, 1999.** President Clinton signs the National Missile Defense Act of 1999, but lists four criteria he will use to make an ultimate deployment decision: threat, cost, technological status of NMD, and adherence to a renegotiated ABM Treaty.
> **January 2001.** President Bush affirms his plan to deploy a robust NMD system. Russian President Putin warns the US that the ABM Treaty bans NMD systems on both sides.
> **May 1, 2001.** In a speech to the National Defense University, President Bush outlines his vision for a national security policy. In the speech, the president advocates an ambitious missile defense and moving beyond the ABM Treaty.
> **June 2001.** The White House FY02 defense budget calls for a 57 percent increase for missile defense, up $3 billion to $8.3 billion.
> **July 11, 2014.** The Pentagon changes its assessment of Iran's ICBM prospects, from "With sufficient foreign assistance, Iran may be technically capable of flight-testing an intercontinental ballistic missile capable of reaching the United States by 2015," to "Iran has publicly stated it may launch a space launch vehicle by 2015 that could be capable of intercontinental ballistic missile ranges if configured as a ballistic missile."
> **December 2016.** Congress scraps the 1999 Missile Defense Act language and removes the modifier "limited" from the missile defense mandate, opening the door to building missile defenses intended to defend not only against the anticipated limited missile capabilities of North Korea and Iran, but those of the peer and near-peer forces of Russia and China. Congress also calls for the MDA to begin research and development, and to test and evaluate space-based missile defense programs.

The list continues with the other so-called threatening states that supposedly justify US NMD, and in between these pivotal dates are a series of technological failures and bureaucratic reorganization of the missile defense's agencies (for more, see the Appendix). The biggest takeaway is this: clearly, US efforts to obtain missile defense can be traced back *much* earlier than China's recent nuclear developments. Major flashpoints cluster around the US departure from the ABM Treaty and subsequent ramping-up of NMD development. This effectively establishes the directionality of the issue: current Sino-American tensions are not due to

aggressive Chinese behavior. Rather, they are due to aggressive *US* behavior. As NMD has not only failed to increase US security but actually decreased it, it has likewise decreased the security of others. The very possibility that NMD could enable US survival in a nuclear war, at least to the point where others' nuclear capabilities are insufficient to cause unacceptable damage, has forced insecurity upon nuclear great powers like China and Russia. This is where theory has accurately predicted an arms race; we now see nuclear states acting to restore their own deterrence and ensure that their nuclear forces can still circumvent, overwhelm, or destroy American missile defense. In practice, this has included increasing the numbers of nuclear weapons in their arsenals, multiplying their number of warheads, or simply implementing cheap decoys.[115] In sum, NMD ineffectively protects US territory and effectively destabilizes other nuclear states. In nearly any direction, other states are forced to respond to maintain their own deterrence, which now manifests as restarting the arms race.

Beyond their inherently destabilizing qualities and consistent logistical failures, the astronomical costs of US missile defense systems only underline the absolutely ludicrous nature of pursuing them. The GMD system currently pursued by the US is on track to cost nearly $87 billion.[116] Congress approved $11.5 billion in 2019 to expand both national and regional missile defense systems; this year's request was for $380 million over the next five years to develop and test a space-based ICBM destroyer.[117] Cutting missile defense would not only end the erosion of MAD, halt the international nuclear arms race, and encourage a more stable world; it would also save literally billions of dollars over time.

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[115] "Missile Defense Countermeasures," UOCS, https://www.youtube.com/watch?v=gNSR7dXHdCY.
[116] See the Nuclear Threat Initiative for the rising costs of national missile defense.
[117] "Fact Sheet: An Introduction to Ballistic Missile Defense," Center for Arms Control and Non-Proliferation, April 27, 2017, https://armscontrolcenter.org/fact-sheet-introduction-ballistic-missile-defense/.

Part III – Unfolding the Paper Tiger: Prescriptions from Theory and Conclusions for Praxis

Thus far, this thesis has striven to clearly delineate and characterize the problem: the new arms race and potential new cold war between the US and China. The argument has established that the discourse about China's nuclear capabilities represents threat inflation rather than actual danger, identifying how China has become a symbolic paper tiger. It also has striven to illuminate the reasons for why we have seen the pursuit of nonsensical nuclear postures and capabilities like NMD, as well as the dangers associated with its unchecked continuation. Now, the argument shifts to the future — what can be done?

As a central framework for this thesis, it is necessary to look to the quintessential axioms of defensive realism for nuclear policy prescriptions. Defensive realism pivots on an international system shaped by anarchy and by states as central actors, with anarchy and states then reciprocally shaping one another. Prominent defensive realists, including Stephen M. Walt, Stephen Van Evera, Jack Snyder, and Charles Glaser,[118] further support that anarchy in itself does not necessitate conflict, that states are defense-oriented, and that conquest and conflict are consequences of insecurity (Mearsheimer, 1994-1995; Walt, 1998).[119] In short, "some strong powers can be benign" (Levy & Thompson, 2010, p. 34),[120] with states able to escape the security dilemma created by anarchy and uncertainty with balancing alliances and defensive military postures (Walt, 1998).[121] This perspective has powerful implications for systemic outcomes, and it is critical for this essay's focus on reliably peace-oriented and watertight policy prescriptions with China.

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[118] John J. Mearsheimer, "The False Promise of International Institutions," *International Security* 19, no. 3 (1994-1995): 11–12.
[119] Stephen Walt, "International Relations: One World, Many Theories," *Foreign Policy* 110 (1998): 31-32.
[120] Jack S. Levy and William R. Thompson, *Causes of War* (Wiley-Blackwell, 2010): 34.
[121] Walt "One World, Many Theories," 31–32.

At its core, defensive realism emphasizes the possibility of dampening the security dilemma and the escapability inherent to it, which makes it extraordinarily useful for generating strategies for peace-focused outcomes with China. History shows that when defense was easier to pursue than offense, "security was more plentiful, incentives to expand declined, and cooperation could blossom," dampening the impacts of anarchy (Walt, 1998).[122] If the US can enact truly security-enhancing nuclear policies that focus on deterrent and not offensive doctrines, both states can escape this conflict spiral. Because nuclear policy is the single most essential arena in which the Sino-American security dilemma is significantly worsening, the capacity for nuclear policy to signal aggressive or cooperative intent — and clarify the ultimate bottom line of the valence of a state's military posture — cannot be understated. All of this also, arguably, makes it the one with the most potential for improvement, which is supported by theoretical conclusions from defensive realism.

Specifically, this essay takes the stance that the US should be pursuing a nuclear policy of minimal deterrence. This posits that "stable deterrence merely requires the assurance that any attack would trigger at least a small retaliatory strike" (Lieber & Press, 2006, pp. 37-38).[123] If the US is investing in true deterrence, not offense, then MAD can remain intact and the arms race can once more be recognized as pointless, costly, and dangerous. As Van Evera (1999) describes, "When the defense dominates, in short, states deploy smaller forces, and less offensive forces. This leads to still smaller and less offensive forces. If information were perfect, arms racing would slow to a crawl. Things would reach equilibrium with minimal defensive forces on both sides" (p. 145).[124]

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[122] Walt "One World, Many Theories," 31–32.
[123] Keir A. Lieber and Daryl G. Press, "The End of MAD? The Nuclear Dimension of U.S. Primacy," *International Security* 30, no. 4 (2006): 37-38.
[124] Stephen Van Evera, *Causes of War* (Ithaca: Cornell University Press, 1999).

Van Evera (1999) further clarifies that "the risk of war is reduced when relative power is clear and the nature and costs of war are known… Hence anything that makes the world more transparent will reduce the risk of war. Policies of deception and secrecy are bad; policies of open disclosure are good" (p. 34).[125] According to this defensive realist approach to mitigating the security dilemma, practical policy solutions for the US and China would be increased transparency in general. In practice, this could look like reliable channels for diplomacy, visible and distinguishable defensive and offensive forces, clearly communicated policy, and support for widely available public information on nuclear capabilities. This would not need to rely on trusting the other state to tell the truth, either; transparency regarding the costs of war can be as simple as both the US and China being able to actively recognize and center the credible threat that is the others' nuclear retaliation. This, supported by deterrence theory, can then de-escalate tensions through both states' self-interest in avoiding the risk of total nuclear war.

Let it be seen that taking actions to dampen the security dilemma, obtain mutually compatible security policies, support defense-dominance, and encourage transparency are all routes toward a more peaceful and less tense nuclear world for both the US and China. Defensive realism offers pragmatic, feasible methods by which states can achieve these steps and maintain their own security, all without provoking insecurity in an opposing state. This posits direct policy solutions for the US and China's conflict spiral. If the US can pursue minimal deterrence, invest in defense rather than offense, and support transparency, the effects of anarchy would be markedly dampened. China, in response to this cooperative tit-for-tat move, would also de-escalate. Security can be sufficiently abundant for both the US and China to avoid any outbreak of great power war, and this collectively beneficial position can miraculously still be accomplished by both states pursuing security out of self-interest.

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[125] Van Evera, *Causes of War*.

Conclusion

In seeking to answer the question, "What is the cause of the deteriorating nuclear relationship between the United States and China?", this thesis has striven to present both breadth and depth of evidence to formulate both an insightful and incisive answer — which, in a nutshell, is "destabilizing American nuclear policy." Using defensive realist theory and nuclear deterrence theory as the broader framework for exploring this question, the argumentation has been segmented into several stages.

Part I, "Setting the Geopolitical Stage: Rhetoric or Reality?", sought to introduce the problem by displaying rhetoric from media, polls on popular opinion, and statements from government and defense bodies with regard to American perspectives on China and the current nuclear tensions. A careful evaluation of pertinent evidence supports a new paradigm that is grounded in historical fact, not present-day rhetoric, and precipitates the conclusion that China has become a nuclear "paper tiger" capable of justifying new US nuclear developments.

Part II, "Actual Nuclear Policy: American Madness sans MAD," began by explaining the Chinese policy of "No First Use," absolving them of the propensity to instigate a nuclear war. Then, it displayed documents, postures, and policies from primarily the US (but also the Chinese) government to illustrate the discrepancy between popular perception and nuclear reality, culminating in the US's shift from MAD to NUTS — deterrence to war-fighting. An overview of nuclear deterrence theory, MAD, and NMD then contextualizes the US pursuit of NMD, which is explained through relying on a timeline of missile defense.

Finally, Part III's "Prescriptions from Theory and Conclusions for Praxis" concludes the investigation by suggesting possible ways forward, drawing from realist theory to do so. Moving

forward, to support global security and peace, the US should pursue minimal nuclear deterrence, adopt a no-first-use policy (ironically, like China's), eliminate all nationally-based missile defense systems, and increase its levels of transparency within its relationship with China.

On the whole, this writing concludes that while China has been aggressive in the international sphere, Chinese nuclear policy simply reflects a reaction to US nuclear aggression. The US is responsible for restarting this arms race by entertaining the possibility of nuclear war vis-à-vis missile defense and offensive doctrine, and China's role is reactionary, not incendiary. With the "how" established, the next question is the "why" — why does the US pursue destabilizing policies like missile defense? It is highly recommended that further research prioritizes this inquiry. It would be particularly interesting to apply an organizational perspective to the US military's pursuit of NMD, expanding organization theory to include the American military-industrial complex. Linking the roots of this network of organizations to the origins of missile defense to illustrate their inexplicable connections was out of the scope of this thesis. However, the gauntlet is thrown down for the next committed scholar of nuclear deterrence to combine an organizational lens with the American system of profit-driven government development and unbridled capitalism.

The ABM Treaty, the US's departure from which has enabled the development of NMD and remains the root of the modern Sino-American nuclear tensions, is unlikely to be revived anytime soon, as Lewis and von Hippel remind us.[126] However, both nuclear deterrence and defense realist theories present numerous avenues for stabilizing prescriptions, with many more options possible than the preview that was explicated in Part IV. If the last nearly fifty-year cold war taught us one thing, it is that an international nuclear-armed conflict *can* end in peace — but this is a result of an active and multidimensional effort on behalf of diplomats, statespeople,

[126] Lewis and von Hippel, "Limitations on ballistic missile defense."

scientists, security analysts, international institutions, accountable journalism, and engaged civilians. This thesis hopes to add yet another perspective to this growing geopolitical issue, and it ends on this idea that a nuclear world can truly bring about peace — as long as we can accept our nuclear reality and align our policies with it.

Glossary

Theoretical definitions

Great power. A great power is defined as a state with major military, economic, and political power in the international sphere. The list is contested, but it is more or less as follows: the US, Russia, China, Europe (the EU treated somewhat monolithically), and India.

Nuclear powers. States which have obtained nuclear capabilities, with much overlap with the great powers.

Hegemony. A condition of state dominance, whether regional or international.

Realism. A school of thought in international relations (IR) theory. It emphasizes states as unitary, (mostly) rational actors that seek survival, autonomy, and either power or security (scholarly debate abounds). It further emphasizes states as the key actors in IR, anarchy as the pivotal force of the international system, and the international balance of power as an essential variable.

Security Dilemma. Most often associated with realism, the security dilemma describes the idea that states, who cannot be sure of other's intentions, hence cannot guarantee their own security. Consequently, they end up in either conflict (worsened and downward) or deterrence (improved and upward) spirals. Historically, it has been widely used as a model for conflicts between the superpowers during the Cold War, particularly with regard to nuclear tensions.

Nuclear definitions

Nuclear capabilities. This refers to the types of nuclear technology possessed by an actor, generally a state. Nuclear capabilities is related to nuclear weapons (what kinds of deadly nuclear

arms a state possesses) but also to nuclear policies, posture, and doctrine, which all describe the political and/or strategic decisions made based on those capabilities.

Primacy. Nuclear primacy describes the position in which a state can completely destroy an opponents' nuclear forces, eliminating any chance that the opponent could launch a second-strike — total first-strike capability. It is next to impossible to achieve.

Deterrence. Nuclear deterrence describes the position in which a state has deterred an attack from an opponent through threat of retaliation. It requires survivable, credible, and controlled second-strike forces launched at countervalue targets.

Arms Race. A nuclear arms race is when two (or more) states both race to obtain an advantage in terms of capabilities over the other state. This technological race for more advanced, destructive, protective, etc. capabilities takes place because every state is seeking to ensure their own security — yet in these efforts, they further threaten the security of the other state(s). Such an arms race typically results when a security dilemma cannot be dampened and devolves into a conflict spiral (see above).

Bibliography

Acton, James M. " The U.S. Exit From the Anti-Ballistic Missile Treaty Has Fueled a New Arms Race." *Carnegie Endowment for International Peace*, December 13, 2021, https://carnegieendowment.org/2021/12/13/u.s.-exit-from-anti-ballistic-missile-treaty-has-fueled-new-arms-race-pub-85977.

Baum, Matthew A. and Potter, Philip B. K. "The Relationships Between Mass Media, Public Opinion, and Foreign Policy: Toward a Theoretical Synthesis." *Annual Review of Political Science* 11, no. 1 (2008), 39-65.

Bilefsky, Dan, Pérez-Peña, Richard, and Nagourney, Eric. "The Roots of the Ukraine War: How the Crisis Developed." *New York Times,* April 21, 2022, https://www.nytimes.com/article/russia-ukraine-nato-europe.html?name=styln-russia-ukraine&region=TOP_BANNER&block=storyline_menu_recirc&action=click&pgtype=LegacyCollection&variant=show&is_new=false.

Burr, William. "Jimmy Carter's Controversial Nuclear Targeting Directive PD-59 Declassified." *National Security Archive Electronic Briefing Book No. 390,* George Washington University, September 14, 2012, https://nsarchive2.gwu.edu/nukevault/ebb390/.

Bush, Richard C. "The U.S. Policy of Extended Deterrence in East Asia: History, Current Views, and Implications." *The Brookings Institution,* February 2011, https://www.brookings.edu/wp-content/uploads/2016/06/02_arms_control_bush.pdf.

Carnesale, Albert, et al. *Living with Nuclear Weapons* (Bantam Books: 1983).

Colby, Elbridge. "If You Want Peace, Prepare for Nuclear War: A Strategy for the New Great-Power Rivalry." *Foreign Affairs* 97, no. 6 (Nov/Dec 2018), 25–32.

Colby, Elbridge. Interview by Clay Travis and Buck Sexton. The Clay Travis and Buck Sexton Show, October 20, 2021, https://www.clayandbuck.com/elbridge-colby-strategizes-about-defending-taiwan/.

Cronk, Terri Moon. "DOD Official Outlines 2022 National Defense Strategy in CNAS Forum." *DoD News.* December 10, 2021, https://www.defense.gov/News/News-Stories/Article/Article/2869837/dod-official-outlines-2022-national-defense-strategy-in-cnas-forum/.

Cunningham, Fiona S. and Fravel, M. Taylor. "China's nuclear arsenal is growing. What does that mean for U.S.-China relations?" *The Washington Post,* November 11, 2021, https://www.washingtonpost.com/politics/2021/11/11/chinas-nuclear-arsenal-is-growing-what-does-that-mean-us-china-relations/.

Dollar, David, Hass, Ryan, and Bader, Jeffrey A. "Assessing U.S.-China relations 2 years into the Trump presidency." *The Brookings Institution*, January 15, 2019, https://www.brookings.edu/blog/order-from-chaos/2019/01/15/assessing-u-s-china-relations-2-years-into-the-trump-presidency/.

Farley, Robert. "Can China's Economy Overtake the United States?"*The Diplomat*, July 23, 2021, https://thediplomat.com/2021/07/can-chinas-economy-overtake-the-united-states/.

Ford, Lindsey W. and Gewirtz, Julian. "China's Post-Coronavirus Aggression Is Reshaping Asia." *Foreign Policy*, June 18, 2020, https://foreignpolicy.com/2020/06/18/china-india-aggression-asia-alliances/.

Foundation for the Future: The ABM Treaty and National Security. Arms Control Association (1990).

Galston, William A. "A momentous shift in US public attitudes toward China." *The Brookings Institution.* March 22, 2021, https://www.brookings.edu/blog/order-from-chaos/2021/03/22/a-momentous-shift-in-us-public-attitudes-toward-china/.

Gunter, Joel. "China committed genocide against Uyghurs, independent tribunal rules." *BBC News*, December 9, 2021, https://www.bbc.com/news/world-asia-china-59595952.

Herbert, Adam J. "The Rise and Semi-Fall of MIRV." *Air Force Magazine*, June 1, 2010, https://www.airforcemag.com/article/0610issbf/.

Huang, Junming, Cook, Gavin G. and Xie, Yu. "Large-scale quantitative evidence of media impact on public opinion toward China." *Humanities and Social Sciences Communications* 8 (July 2021).

Jervis, Robert. "Cooperation Under the Security Dilemma." *World Politics* 30, no. 2 (1978), 167–214. https://doi.org/10.2307/2009958.

Jervis, Robert. *The Meaning of the Nuclear Revolution* (Cornell University Press: 1989).

Judson, Jen. "Pentagon terminates program for redesigned kill vehicle, preps for new competition." *Defense News*, August 21, 2019, https://www.defensenews.com/pentagon/2019/08/21/dod-tanks-redesigned-kill-vehicle-program-for-homeland-defense-interceptor/.

Kapp, P. H. "Die Koue Oorlog: Die Wêreld Se Langste Oorlog? / The Cold War: The World's Longest War?" *Scientia Militaria - South African Journal of Military Studies* 27, no. 1 (2012), https://doi.org/10.5787/27-1-227.

Kaufman, Ellie and Starr, Barbara. "Top military official warns China and Russia are modernizing nuclear weapons faster than US." *CNN,* April 20, 2021, https://www.cnn.com/2021/04/20/politics/china-russia-nuclear-weapons/index.html.

Keeney, Spurgeon M. Jr. and Panofsky, Wolfgang K. H. "Mad versus Nuts: Can Doctrine or Weaponry Remedy the Mutual Hostage Relationship of the Superpowers?" *Foreign Affairs* 60, no. 2 (Winter, 1981), 287–304, https://news.stanford.edu/news/2007/april18/pief-041807.html.

Kristensen, Hans M. and Korda, Matt. "Chinese nuclear forces, 2020." *Bulletin of the Atomic Scientists* 76, no. 6 (2020), 443-457, https://doi.org/10.1080/00963402.2020.1846432.

Lendon, Brad and Yeung, Jessie. "China, US, UK, France and Russia pledge to avoid nuclear war." *CNN*, January 4, 2022, https://www.cnn.com/2022/01/04/world/p5-nations-nuclear-pledge-intl-hnk/index.html.

Levy, Jack S. and Thompson, William R. *Causes of War* (Wiley-Blackwell, 2010).

Lewis, George and von Hippel, Frank. "Limitations on ballistic missile defense — Past and possibly future." *Bulletin of the Atomic Scientists* 74, no. 4 (2018): 199-209, https://doi.org/10.1080/00963402.2018.1486575.

Lewis, George N. and Postol, Theodore A. "A Flawed and Dangerous U.S. Missile Defense Plan." *Arms Control Today* 40, no. 4 (2010): 24-32.

Lieber, Keir A. and Press, Daryl G. "The End of MAD? The Nuclear Dimension of U.S. Primacy." *International Security* 30, no. 4 (2006).

Lim, Louisa and Langfitt, Frank. "China's Assertive Behavior Makes Neighbors Wary," *NPR*, November 2, 2012, https://www.npr.org/2012/11/02/163659224/chinas-assertive-behavior-makes-neighbors-wary.

Lumbers, Michael. "Whither the Pivot? Alternative U.S. Strategies for Responding to China's Rise." *Comparative Strategy* 34, no. 4 (2015), 311-329, https://doi.org/10.1080/01495933.2015.1069510.

Maizland, Lindsay. "Why China-Taiwan Relations Are So Tense." *CFR*, May 10, 2021, https://www.cfr.org/backgrounder/china-taiwan-relations-tension-us-policy.

McFall, Caitlin. "US losing military edge in Asia as China looks like it is planning for war: US Indo-Pacific Command chief." *Fox News*, March 10, 2021, https://www.foxnews.com/politics/us-losing-military-edge-in-asia-as-china-looks-like-planning-for-war-admiral.

Mearsheimer, John J. "Realists as Idealists." *Security Studies* 20, no. 3 (2011).

Mearsheimer, John J. “The False Promise of International Institutions.” *International Security* 19, no. 3 (1994-1995): 11–12.

Mearsheimer, John J. *The Tragedy of Great Power Politics (updated edition)* (W. W. Norton and Company, 2001).

Parakilas, Jacob. “China-US Tensions Put Nuclear War Back in the Spotlight.” *The Diplomat*, November 6, 2021, https://thediplomat.com/2021/11/china-us-tensions-put-nuclear-war-back-in-the-spotlight/ .

Posen, Barry. *The Sources of Military Doctrine: France, Britain, and Germany Between the World Wars* (Ithaca: Cornell University Press, 1984).

Punton, Melanie and Welle, Katharina. “Straws-in-the-wind, Hoops and Smoking Guns: What can Process Tracing Offer to Impact Evaluation?” *Centre for Development Impact Practice Paper* no. 10 (April 2015).

Sanger, David E. and Broad, William J. “As China Speeds Up Nuclear Arms Race, the U.S. Wants to Talk.” *The New York Times*, November 28, 2021, https://www.nytimes.com/2021/11/28/us/politics/china-nuclear-arms-race.html.

Schuman, Michael. “China Now Understands What a Nuclear Rivalry Looks Like.” *The Atlantic,* February 16, 2022, https://www.theatlantic.com/international/archive/2022/02/china-russia-nuclear-weapons/622089/.

Smith, Alexandra. “‘Genocide’: To Use Or Not To Use.” *Human Rights Pulse,* April 26, 2021, https://www.humanrightspulse.com/mastercontentblog/genocide-to-use-or-not-to-use.

Snyder, Jack. *Myths of Empire: Domestic Politics and International Ambitions* (Cornell University Press: 1991).

Sonne, Paul. “China is ramping up nuclear and missile forces to rival U.S., Pentagon says.” *The Washington Post,* September 1, 2020, https://www.washingtonpost.com/national-security/china-is-ramping-up-nuclear-and-missile-forces-to-rival-us-pentagon-says/2020/09/01/00c4dca4-ec95-11ea-a21a-0fbbe90cfd8c_story.html?outputType=amp.

Spurgeon M. Keeny Jr. and Wolfgang K. H. Panofsky, “Mad versus Nuts: Can Doctrine or Weaponry Remedy the Mutual Hostage Relationship of the Superpowers?” *Foreign Affairs* 60, no. 2 (Winter, 1981), 287-304, https://news.stanford.edu/news/2007/april18/pief-041807.html.

Talmadge, Caitlin. "The US-China nuclear relationship: Why competition is likely to intensify." *The Brookings Institution*, September 2019, https://www.brookings.edu/research/china-and-nuclear-weapons/.

Tucker, Patrick. "US Nuclear Fears Are Shifting From a Clear Russian Threat to a Murkier Chinese One." *Defense One*, April 20, 2021, https://www.defenseone.com/threats/2021/04/us-nuclear-fears-are-shifting-clear-russian-threat-murkier-chinese-one/173501/.

Van Evera, Stephen . *Guide to Methods for Students of Political Science* (Ithaca: Cornell University Press, 1997).

Walt, Stephen. "International Relations: One World, Many Theories." *Foreign Policy* 110 (1998): 31-32.

Waltz, Kenneth N. and Sagan, Scott. *The Spread of Nuclear Weapons: An Enduring Debate* / Scott Sagan, Kenneth Waltz (New York: W. W. Norton & Company, Inc., 2013),

Waltz, Kenneth N. *Man, the State, and War: A Theoretical Analysis* (New York: Columbia University Press, 1959).

Yan, Xuetong. "Chinese Values vs. Liberalism: What Ideology Will Shape the International Normative Order?" *The Chinese Journal of International Politics* 11, no. 1 (Spring 2018), pp. 1–22, https://doi.org/10.1093/cjip/poy001.

"2017 National Security Strategy [2017 NSS]." US Department of Defense (2017), https://history.defense.gov/Historical-Sources/National-Security-Strategy/.

"2018 National Defense Strategy [2018 NDS]." US Department of Defense (2018), https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf.

"2018 National Security Strategy [2018 NSS]." US Department of Defense (2018).

"2019 Missile Defense Review [2019 MDR]," US Department of Defense (2019), https://media.defense.gov/2019/Jan/17/2002080666/-1/-1/1/2019-MISSILE-DEFENSE-REVIEW.PDF.

"Annual Report to Congress: Military and Security Developments Involving the People's Republic of China, 2020." Office of the Secretary of Defense (2020).

"China, NATO officials discuss Afghanistan, regional tensions." *Associated Press*, September 27, 2021, https://apnews.com/article/china-afghanistan-beijing-taliban-wang-yi-ac491ce93182cc20bf63da23066afa36

"China." Center for Arms Control and Non-Proliferation, https://armscontrolcenter.org/countries/china/.

"Costs of Implementing Recommendations of the 2019 Missile Defense Review." Congressional Budget Office (CBO), January 2021, https://www.cbo.gov/publication/56960.

"Current U.S. Missile Defense Programs at a Glance." Arms Control Association, August 2019, https://www.armscontrol.org/factsheets/usmissiledefense#gbmd.

"Fact Sheet: An Introduction to Ballistic Missile Defense." Center for Arms Control and Non-Proliferation, April 27, 2017, https://armscontrolcenter.org/fact-sheet-introduction-ballistic-missile-defense/.

"Frequently Asked Questions about Taking Nuclear Weapons Off Hair-Trigger Alert." UOCS, January 2015, https://www.ucsusa.org/sites/default/files/attach/2015/01/Hair-Trigger%20FAQ.pdf.

"History of the Agency." Missile Defense Agency [MDA], https://www.mda.mil/about/history.html.

"Index of US Mainstream Media Ownership." The Future of Media Project. Institute for Quantitative Social Science (IQSS), Harvard University, May 11, 2021. https://projects.iq.harvard.edu/futureofmedia/index-us-mainstream-media-ownership.

"Military and Security Developments Involving the People's Republic of China." US Department of Defense (2020).

"Missile Defense Countermeasures." UOCS, Dec 19, 2011, video, https://www.youtube.com/watch?v=gNSR7dXHdCY.

"Missile Defense: Observations on Ground-based Midcourse Defense Acquisition Challenges and Potential Contract Strategy Changes." US Government Accountability Office (October 21, 2020).

"Most Americans Have 'Cold' Views of China. Here's What They Think About China, In Their Own Words." Pew Research Center, June 30, 2021, https://www.pewresearch.org/global/2021/06/30/most-americans-have-cold-views-of-china-heres-what-they-think-about-china-in-their-own-words/.

"National Defense Strategy." Historical Office, Office of the Secretary of Defense, https://history.defense.gov/Historical-Sources/National-Defense-Strategy/.

"No First Use." Center for Arms Control and Non-Proliferation, https://armscontrolcenter.org/issues/no-first-use/.

"No-First-Use Policy Explained." Union of Concerned Scientists, May 7, 2020, https://www.ucsusa.org/resources/no-first-use-explained.

"Nuclear Weapons: Who Has What at a Glance." Arms Control Association, January 2022. https://www.armscontrol.org/factsheets/Nuclearweaponswhohaswhat.

"Physicists Argue US ICBM Defenses are Unreliable." American Institute of Physics, March 1, 2022, https://www.aip.org/fyi/2022/physicists-argue-us-icbm-defenses-are-unreliable.

"Restraint or strength? Which nuclear option will Biden take to tackle China?" Yahoo News, January 9, 2022, https://www.yahoo.com/video/restraint-strength-nuclear-option-biden-093000531.html.

"Russia's Nuclear Weapons: Doctrine, Forces, and Modernization." Congressional Research Service (2022).

"The Anti-Ballistic Missile (ABM) Treaty at a Glance." Arms Control Association, December 2020, https://www.armscontrol.org/factsheets/abmtreaty.

"Timeline: A chronicle of missile defense, from the dawn of the Missile Age during World War II to the present." PBS Frontline (2002), https://www.pbs.org/wgbh/pages/frontline/shows/missile/etc/cron.html.

"Trump's Foreign Policy Moments, 2017–2021." Council on Foreign Relations, https://www.cfr.org/timeline/trumps-foreign-policy-moments.

"US Ballistic Missile Defense Timeline: 1945-Today." Union of Concerned Scientists, published July 21, 2007 and updated March 29, 2019, https://www.ucsusa.org/resources/us-missile-defense-timeline.

"Wang Yi Meets with NATO Secretary General Jens Stoltenberg at Request via Video Link." Embassy of the People's Republic of China in the United States of America, September 28, 2021, http://www.china-embassy.org/eng/zgyw/202109/t20210928_9574452.htm.

Appendix

The timeline below is from the Union of Concerned Scientists.[127] The most salient flashpoints pertaining to this argument were displayed earlier in the Part II subsection "The Details of American NMD," and the following pages detail the timeline in its entirety. All bolded text is original, with emphasis not my own.

REPORTS & MULTIMEDIA / EXPLAINER
US Ballistic Missile Defense Timeline: 1945-Today
Published Jul 21, 2007 | Updated Mar 29, 2019

Since the system's deployment in 2002, **six out of ten test intercepts have failed.**

1945-1990
1945. Following World War II, the US Army begins planning for research and development of missile defenses. Meanwhile, US defense contractors conclude that such technology is beyond their current reach.
1957. US begins work on its first major missile defense effort, the Nike-Zeus system.
1962. After technology flaws doom the Nike-Zeus project, the US begins work on the Nike X missile defense program, which uses nuclear-tipped interceptors.
1966. US Defense Secretary McNamara announces that the Soviet Union has deployed its Galosh missile defense system.
September 1967. President Johnson announces plans to deploy the Sentinel missile defense system (a successor to the Nike X program).
February 1969. President Nixon delays deployment to review US nuclear programs.
March 1969. Now called Safeguard, the system is given go-ahead for deployment.
August 1969. US Senate votes to deploy Safeguard missile defense, with the Vice President casting a tie-breaking vote.
May 1972. US and Soviet Union sign the ABM Treaty, banning nationwide missile defenses and limiting each side to two missile defense sites with no more than 100 interceptors at each site.
July 1974. ABM Treaty amended to allow only one limited missile defense site to each side.
October 1, 1975. Safeguard system begins operating in Grand Forks, ND.
October 2, 1975. US House of Representatives votes to close the Grand Forks Safeguard site.
January 1976. The full Congress approves shutting down Safeguard, and Secretary of Defense

[127] "US Ballistic Missile Defense Timeline: 1945-Today," *Union of Concerned Scientists*, published July 21, 2007 and updated March 29, 2019, https://www.ucsusa.org/resources/us-missile-defense-timeline.

Donald Rumsfeld announces the system's termination.
1978. The Safeguard system is terminated completely.
March 23, 1983. President Reagan announces that the US will start an expanded research and development program of missile defense system which makes "nuclear weapons impotent and obsolete." His idea becomes the "Strategic Defense Initiative," or SDI. Opponents call it "Star Wars."
April 24, 1984. Secretary of Defense Weinberger signs a Strategic Defense Initiative Organization (SDIO) charter.
October 1986. President Reagan and Soviet President Gorbachev discuss the complete elimination of nuclear weapons, but the proposal collapses when Reagan refuses to agree to limitations on SDI.
June 14, 1989. President Bush decides to continue the SDI program, but focus on the development of "Brilliant Pebbles," a space-based interceptor design.
July 31, 1989. Presidents Bush and Gobachev sign START I, reducing arsenals to 6,000 deployed warheads on each side.
1990-1999
January 29, 1991. President Bush announces the Global Protection Against Limited Strikes (GPALS) system to counter unauthorized, accidental or limited attacks.
February 1991. During the Persian Gulf War, the US Patriot missile attempts to intercept Iraqi Scud attacks. Despite initial glowing reports from the Pentagon, a study by the General Accounting Office shows that only 9 percent of intercept attempts were reliably successful.
January 3, 1993. Presidents Bush and Yeltsin sign START II, limiting deployed warheads on each side to 3,000-3,500.
May 1993. Secretary of Defense Aspin renames SDIO the Ballistic Missile Defense Organization (BMDO).
February 15, 1995. The House narrowly defeats the section of the Republican "Contract with America" requiring deployment of a nationwide missile defense as soon as practical.
November 1995. A report from the intelligence community declares that no country could threaten the US with a ballistic missile attack in the next 15 years.
March 1996. The "Defend America Act," which declares it US policy to build a limited missile defense by 2003 is introduced in Congress, but does not come to a vote due to the enormous projected cost of deployment, then estimated at $31-60 billion.
June 24, 1997. First fly-by test of the Boeing/TRW exoatmospheric kill vehicle for the NMD system. A lawsuit filed by a former TRW employee alleges that TRW misled defense officials about the results of the test.
March 21, 1997. Presidents Clinton and Yeltsin agree to a START III framework.
September 26, 1997. The US and Russia agree that the ABM Treaty includes Belarus, Kazakhstan and Ukraine.
February 1998. First report issued by commission chaired by retired Air Force Gen. Larry Welch on the status of US missile defense programs. The report is critical of BMDO's efforts,

finding a “rush to failure” schedule.
April 30, 1998. DoD selects Boeing as lead contractor for the NMD program.
July 1998. A commission chaired by Donald Rumsfeld (now secretary of defense) finds that the threat of a ballistic missile attack could emerge sooner than predicted in the 1995 intelligence estimate. Many experts criticize the commission, however, for emphasizing what could happen rather than what was likely to happen.
August 31, 1998. North Korea launches a Taepo Dong 1 missile over Japan, but the third stage fails to put its payload in orbit.
January 20, 1999. DoD requests more funds for NMD and announces the delay of the target date for achieving initial operating capability from 2003 to 2005, also moving the deployment decision date to June 2000.
March 1999. “The National Missile Defense Act of 1999” passes the Senate, while the House of Representatives approves a measure committing the United States to deploy national missile defenses.
July 23, 1999. President Clinton signs the National Missile Defense Act of 1999, but lists four criteria he will use to make an ultimate deployment decision: threat, cost, technological status of NMD, and adherence to a renegotiated ABM Treaty.
September 1999. The Welch panel again concludes that the Pentagon's approach is extremely high-risk after assessing the reconfigured NMD program.
October 2, 1999. This element test (IFT-3) of the EKV relied on a surrogate booster vehicle. Because the Inertial Measurement Unit malfunctioned, the EKV used a backup acquisition mode to acquire the target.
2000-2009
January 19, 2000. The first end-to-end system intercept test (IFT-4), relying on a surrogate booster vehicle. The test was designed to target a mock warhead, transmitting its location by GPS, and ignore a single large decoy balloon. The missile failed to intercept the target due to a failure of the EKV infrared homing sensors’ cooling system a few seconds before the planned intercept. This was the first test that integrated other elements of the NMD system into the actual test scenario.
June 13, 2000. The third Welch panel reports that NMD deployment by 2005 for Initial Operational Capability (IOC) remains high risk.
July 8, 2000. First Integrated System intercept Test (IFT-5) featuring all NMD elements in the initial capability except for the interceptor booster. The test failed when the EKV did not separate from the surrogate booster used. As well, the test decoy failed to inflate.
September 1, 2000. President Clinton decides not to proceed with deployment of the NMD system, citing the status of technology and concerns among the US allies and opposition from Russia and China. He defers an ultimate deployment decision to the next administration.
January 2001. President Bush affirms his plan to deploy a robust NMD system. Russian President Putin warns the US that the ABM Treaty bans NMD systems on both sides.
May 1, 2001. In a speech to the National Defense University, President Bush outlines his vision

for a national security policy. In the speech, the president advocates an ambitious missile defense and moving beyond the ABM Treaty.

June 2001. The White House FY02 defense budget calls for a 57 percent increase for missile defense, up $3 billion to $8.3 billion.

June 13, 2001. Bush meets NATO leaders. Among the 19 NATO states, Spain, Hungary, Italy, Poland, Czech Republic, and Britain publicly signal some approval, to varying degrees, for NMD. France, Germany, and others remain vehemently against Bush's plan, emphasizing the need to strengthen arms control regimes.

June 16, 2001. First Bush-Putin summit in Slovenia. Although a cordial meeting, the two leaders fail to reach concrete agreements on missile defense and the ABM Treaty.

July 14, 2001. The fourth intercept test (IFT-6) of the ground-based midcourse system successfully intercepts a mock warhead. Later reports find that this test, like others before it, was aided by the use of a homing beacon in the mock warhead.

December 3, 2001. In this test (IFT-7) the kill vehicle successfully intercepted the target. One decoy balloon was used. This test was a repeat of IFT-6.

January 11, 2002. Ballistic Missile Defense Organization (BMDO) changes name to Missile Defense Agency (MDA).

March 15, 2002. This successful intercept test (IFT-8) of the ground-based midcourse system included three balloon decoys (one large and two small). While increasing the number of decoys increased the complexity of this test, the additional balloons did not increase the difficulty of the discrimination task, since their appearance was very different from the warhead. For a detailed analysis of this test, see the UCS report Decoys and Discrimination in Test IFT-8.

June 2002. Ground broken at Fort Greely, Alaska for construction of six missile interceptor silos as a test bed for missile defense system.

December 17, 2002. President Bush announces that he has instructed the Secretary of Defense to begin fielding a ground-based missile defense that would achieve initial operational capabilities in 2004.

October 14, 2002. This successful intercept test (IFT-9) of the Ground-Based Midcourse system used the same decoys as the previous test, but a modified warhead. The ship-based SPY-1 radar observed the test for the first time, to assess the radar's capacity to track long-range missiles. For a detailed analysis of the IFT-9 test, see the UCS report The Target Set for Missile Defense Test IFT-9.

December 11, 2002. This intercept test (IFT-10) of the ground-based midcourse system failed because the exoatmospheric kill vehicle (EKV) failed to separate from the interceptor and the booster rocket. Note that this is the same failure as that in the IFT-5 (July 8, 2000), detailed above. This was the first IFT performed at night. Previous tests had been conducted in the evening, with the sun illuminating the targets from behind the kill vehicle.

July 22, 2004. First interceptor installed in silo at Fort Greely, Alaska.

December 15, 2004. This intercept test (IFT-13C) of the ground-based midcourse system failed when the booster carrying the interceptor failed to leave the ground in a launch from Kwajalein

atoll. The interceptor was to hit a target coming out of Kodiak, Alaska.

February 13, 2005. This intercept test (IFT-14) was a repeat of the test on December 15, 2004, and the interceptor again failed to leave the silo.

September 1, 2006. In this intercept test (FTG-2) of the ground-based midcourse system the target ballistic missile was successfully intercepted over the Pacific, having been launched from the Kodiak Launch Complex in Alaska and the interceptor from Vandenburg Air Force Base. No decoys were used.

March 21, 2007. The target vehicle in this test was successfully tracked by the Sea-Based X-band (SBX) radar and two Aegis Ballistic Missile Defense ships using onboard SPY-1 radar.

May 25, 2007. The interceptor for a planned test (FTG-3) of the ground-based midcourse system was never launched from Vandenburg Air Force Base in this test because the target vehicle launched from Kodiak, Alaska fell far short of the designated interceptor range in the Pacific.

September 28, 2007. In this repeat (FTG-3A) of the May 25, 2007 intercept test of the ground-based midcourse system a target missile launched from Kodiak, Alaska was successfully intercepted by an interceptor launched from Vandenberg Air Force Base.

July 18, 2008. This test of the ground-based midcourse system initially had been planned to be an intercept attempt, but faulty parts in the test interceptor made Missile Defense Agency (MDA) officials opt instead to see how four sensors – the Sea-based X-band radar, the AN/TPY-2 X-band radar temporarily placed in Juneau, Alaska, the Aegis Long-Range Surveillance and Track system, and an upgraded early warning radar in Beale Air Force Base, Calif. – fared in tracking a test target.

December 5, 2008. In this intercept test (FTG-5) of the ground-based midcourse system an interceptor launched from Vandenberg Air Force Base, Calif., intercepted a target launched from Ft. Greely, Alaska. While an intercept did occur, the countermeasures that were used (two balloons) failed to deploy. And even if they had, the decoys were reported by MDA to be "less sophisticated than the countermeasures flown in 2002," so the interceptor would have been less challenged than with decoys in tests six years prior to FTG-5. See the UCS report Missile Defense Test FTG-05.

2010 - today

January 31, 2010. In this intercept test (FTG-6) a target missile was successfully launched from the U.S. Army's Reagan Test Site at Kwajalein Atoll in the Republic of the Marshall Islands. Approximately six minutes later, an interceptor was successfully launched from Vandenberg Air Force Base, Calif. Both the target missile and interceptor performed normally after launch. However, the Sea-Based X-band radar did not perform as expected and the interception failed.

June 6, 2010. In this flight test a two-stage Ground-Based Interceptor (GBI) was launched from Vandenberg Air Force Base, California. After performing flyout maneuvers, the two-stage booster delivered an exoatmospheric kill vehicle to a designated point in space. After separating from the second-stage booster, the kill vehicle executed a variety of maneuvers to collect data to further prove the performance of the kill vehicle in space.

December 15, 2010. In this intercept test (FTG-6A), an intermediate-range ballistic missile

target was launched from the Ronald Reagan Test Site on Kwajalein Atoll in the Republic of the Marshall Islands and a long-range interceptor missile launched from Vandenberg Air Force Base, California. The Sea Based X-Band radar (SBX) and all sensors performed as planned. The missile failed to intercept the target.

September 2012. The National Academy of Science releases a report entitled "Making Sense of Missile Defense," which called the GMD system "deficient" with respect to all of the study's fundamental principles for a cost-effective missile defense, and recommended a complete overhaul of the interceptors, sensors, and concept of operations.

March 15, 2013. Secretary of Defense Chuck Hagel directs the Missile Defense Agency, in response to advances in North Korea's nuclear and missile programs, to field 14 more GBI by 2017, to bring the system to a full complement of 44 interceptors. He also cancels the fourth phase of the European Phased Adaptive Approach missile defense program, due to a lagging development timeline.

January 26, 2013. In this flight test (GM-CTV-01) of a three-stage Ground-Based Interceptor (GBI) launched from Vandenberg Air Force Base, California, the three-stage booster deployed the Exoatmospheric Kill Vehicle to a designated point in space. After separating from the booster, the Exoatmospheric Kill Vehicle executed a variety of pre-planned maneuvers to collect performance data in space. Engineering data from this test will be used to improve confidence for future intercept missions. This test is the critical first step in returning GMD to successful intercept testing.

July 5, 2013. In this intercept test (FTG-7), a target missile was launched from the U.S. Army's Reagan Test Site on Kwajalein Atoll, Republic of the Marshall Islands and a Ground-Based Interceptor missile from its silo at Vandenberg Air Force Base, California. The test required an exoatmospheric kill vehicle to separate from the GBI's upper stage booster and maneuver to a collision course with the target. The kill vehicle failed to separate from the booster. Though the exact cause of the FTG-07 anomaly is not yet known, the EKV has failed to separate from the interceptor and booster on two previous occasions, first in July 2000 and again in December 2002.

July 11, 2014. The Pentagon changes its assessment of Iran's ICBM prospects, from "With sufficient foreign assistance, Iran may be technically capable of flight-testing an intercontinental ballistic missile capable of reaching the United States by 2015," to "Iran has publicly stated it may launch a space launch vehicle by 2015 that could be capable of intercontinental ballistic missile ranges if configured as a ballistic missile."

September 8, 2014. The Department of Defense's Inspector General releases a report evaluating the quality control of the production of the GMD system's kill vehicles. It states that "A combination of cost constraints and failure-driven program restructures has kept the program in a state of change. Schedule and cost priorities drove a culture of "Use-As-Is" leaving the EKV as a manufacturing challenge. With more than 1,800 unique parts, 10,000 pages of work instructions, and 130,000 process steps for the current configuration, EKV repairs and refurbishments are considered by the Program to be costly and problematic and make the EKV susceptible to quality

assurance failures."

September 30, 2014. The Ground-based Midcourse System turns 10 years old. On September 30, 2004 the George W. Bush administration declared that the GMD system had achieved a limited deployment option (LDO) capability, meaning the system was now capable of being turned on and used if necessary. Only five interceptors were in place that day: it would be almost exactly two years before an intercept test of the kind of interceptors that were fielded was even attempted. It was another year beyond that—on September 28, 2007—before an intercept test was successful. On this date, the intercept test record is seven successful intercepts out of 16 attempts.

November 5, 2014. Admiral Jonathan Greenert, Chief of Naval Operations, and General Raymond Odierno, US Army Chief of Staff, urge the Secretary of Defense to take a fresh look at the problem of defending against ballistic missiles. They state that "the present acquisition-based strategy is unsustainable" and that the Pentagon must develop a "more sustainable and cost-effective" "long-term" approach to both homeland and regional missile defenses.

June 2015. A US Government Accountability Office report revealed two important problems with the GMD system. The Pentagon stated that it will delay "emplacing" the interceptors until a test had validated the fixes, but would not wait for a successful test before producing them. The reason: delaying the production and integration until a successful flight test is conducted "would unacceptably increase the risk to reaching the Secretary of Defense mandate to achieve 44 emplaced interceptors by the end of 2017."

July 14, 2015. The negotiation of the Joint Comprehensive Plan of Action concludes. The agreement, reached by Iran and the P5+1 (China France, Germany, Russia, the United Kingdom, and the United States), substantially limits the ability of Iran to develop nuclear weapons.

October 2015. Congress directs the Missile Defense Agency to *"commence the concept definition of a space-based ballistic missile intercept layer to the ballistic missile defense system that provides— (1) a boost-phase layer for missile defense; or (2) additional defensive options against direct ascent anti-satellite weapons, hypersonic glide vehicles, and maneuvering reentry vehicles."*

January 2016. MDA performs a non-intercept test of the GMD system, meant to validate fixes and updates to the kill vehicle and to gather information about how well the system can discriminate target from decoys. While described by MDA as a success, later information came out that suggested that one of the motors on the kill vehicle did not restart after being shut down, and that the kill vehicle veered far off course from its nominal target.

February 2016. North Korea successfully puts its second satellite into orbit.

December 2016. Congress scraps the 1999 Missile Defense Act language and removes the modifier "limited" from the missile defense mandate, opening the door to building missile defenses intended to defend not only against the anticipated limited missile capabilities of North Korea and Iran, but those of the peer and near-peer forces of Russia and China. Congress also calls for the MDA to begin research and development, and to test and evaluate space-based missile defense programs.

May 30, 2017. Successful GMD test FTG-15 tests against what is described to be an ICBM-range target. It is a nearly head-on engagement of a test missile of around 5,800 km. This brings the intercept test record to nine successful target destructions out of 18 attempts.
July 28, 2017. North Korean missile test indicates that its ICBM appears to be able to reach major US cities.
March 25, 2019. Successful GMD test FTG-15 pitted two interceptors against a target. It was the first test of "salvo" engagement and the first operational, rather than developmental, test of the system. The GMD system has now successfully destroyed its target in ten of 19 attempts.

Summary of test intercepts

Test #	Date	Designation	Successful?
1	10/2/1999	IFT-3	Y
2	1/18/2000	IFT-4	N
3	7/7/2000	IFT-5	N
4	7/14/2001	IFT-6	Y
5	12/3/2001	IFT-7	Y
6	3/15/2002	IFT-8	Y
7	10/14/2002	IFT-9	Y
8	12/11/2002	IFT-10	N
System is deployed			
9	12/15/2004	IFT-13C	N
10	2/14/2005	IFT-14	N
11	9/1/2006	FTG-02	N*
12	9/28/2007	FTG-03A	Y
13	12/5/2008	FTG-05	Y
14	1/31/2010	FTG-06	N
15	12/15/2010	FTG-06A	N
16	7/5/2013	FTG-07	N
17	6/22/2014	FTG-06B	Y
18	5/30/2017	FTG-15	Y
19	3/25/2019	FTG-11	Y

*The interceptor in FTG-02 hit the target with a glancing blow that did not destroy the warhead. The Missile Defense Agency rated the test as a "hit" but not a "warhead kill," counting it as a success. But because the goal of developing hit-to-kill interceptors is to guide the kill vehicle to destroy the warhead, we do not count this as a successful demonstration.