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U.S. Strategic Culture, Homeland Ballistic Missile Defense, and Mutual Vulnerability

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Culture is an indispensable element of strategic policymaking. From Sun Tzu to Carl von Clausewitz, renowned theorists of strategic studies have consistently noted the importance of cultural considerations in the conduct of warfare and the shaping of national security outputs. Such insights lacked a dedicated field of study until the latter half of the 20th century, when Jack Snyder coined the term “strategic culture” in 1977 as part of an effort to explain the differing nuclear behavior between the United States and Soviet Union. The roughly fifty years since Snyder’s work has seen continuous scholarship on the influence of strategic culture on the security outputs of a given state.

Despite widespread consensus on salient aspects of American strategic culture, there is one area of policy that fails to generate the expected result—missile defense. Strong emphases on technological innovation, an optimistic and problem-solving mentality, a positive approach to machines and engineering, and other elements of American strategic culture point to what should be a decisive path toward comprehensive missile defense; yet, the United States has consciously chosen to remain vulnerable to the overwhelming majority of adversary ballistic missiles since the signing of the Anti-Ballistic Missile (ABM) Treaty in 1972.¹ The incongruity between U.S. strategic culture and mutual vulnerability required by the mutually assured destruction (MAD) approach has failed to eradicate the allure of mutual vulnerability from portions of the defense policymaking community. U.S. strategic culture is more consistent with



deterrence by denial measures, such as robust homeland ballistic missile defense, than mutual vulnerability typical of an assured destruction approach; however, mutual vulnerability has played a disproportionate role in guiding U.S. security policy since the Cold War.

Social Manifestations of U.S. Strategic Culture

Optimism and Problem-Solving Mentality. Born out of the unimaginable string of environmental, political, and military successes, the American psyche is uniquely optimistic about challenges both domestic and international. Insulated almost entirely from the perverse suffering typical of the interstate wars that ravaged Europe over the same time period, the American experience lacked such pessimistic reminders of the worst of the human condition. Instead, the grand political experiment of a new beginning, grounded in pragmatic deference to the supremacy of the individual, reinforced a common understanding that all problems – social, natural, security, etc. – can be solved.²

The sanguine approach to the complex issues of the human experience reinforces a problem-solving mentality diffused across all layers of American society. With success as the expected outcome, an insoluble problem cannot exist. Incontestable structural conditions are often misread as problems that are capable of being “solved” under this framework, leading to surprise when efforts fall short of expectations.³ Nevertheless, the can-do outlook persists as an enduring and highly esteemed trait in American society. As Dr. Jeannie L. Johnson, an associate professor of political science and director of Utah State University’s Center for Anticipatory Intelligence, notes, “Problem-solving is key to American identity – being a problem-solver is both a requirement for most occupations and an admired personal trait. For Americans, it is also perceived to be the primary purpose of human activity.”⁴

Logical-Analytical Cognitive Style. Through a pioneering study of revolutions in military affairs (RMAs), Dr. Dima Adamsky, an associate professor at the Lauder School of Government, Diplomacy, and Strategy at Reichman University in Israel, connected the field of cognitive psychology with strategic culture analysis. Dr. Adamsky theorized that a driving factor behind a state’s ability to conceptualize and implement an RMA was its cognitive style – the “preferred collection of strategies to perceive, organize, and process information.”⁵ Drawing upon research from psychologists, sociologists, and anthropologists, Dr. Adamsky found that American culture prefers a logical-analytical approach, characterized by “the optimistic belief that there is an objective essence that can be reached through the linear process of discovery.”⁶

Positive Role of Machines. The subjugation of the vast American frontier and rise to industrial and military preeminence did not take place by sheer force of human will. American culture, in seeking a solution to all problems, has readily embraced machines to aid in its various natural and social conquests. Technology is thus approached as a “liberating force that improves quality of life.”⁷ While this mentality has produced astounding levels of technological improvement, it has also internalized a potentially dangerous assumption that



the U.S. engineering base has the capacity to catch up with any other state's advances given the requisite prioritization.⁸

Military Manifestations: The American Way of War

Technologically Driven. The American method of warfighting leverages significant qualitative advantages in technology to overmatch any potential adversary. Born out of the necessity of machines to dominate the vast frontier, techno-centric warfare makes liberal use of the concept that all challenges can be overcome through the proper mechanical input. As Thomas G. Mahnken, Senior Research Professor and Co-Director of the Master of Arts in Strategy, Cybersecurity, and Intelligence at the Johns Hopkins School of Advanced International Studies, observes, "No nation in recent history has placed greater emphasis upon the role of technology in planning and waging war than the United States."⁹

Drawing upon unique structural incentives to technologically progress, the United States has demonstrated a repeated ability to innovate new military technology or adapt civilian advances for military benefit as early as the Civil War.¹⁰ During the Cold War, the technological edge of U.S. forces attempted to counterbalance the vast numerical superiority of the Warsaw Pact forces arrayed against them in Europe.¹¹ U.S. leadership understood that the quantitative overmatch of Soviet forces would never be replicated by the North Atlantic Treaty Organization (NATO), prompting emphasis on advanced technology to offer a qualitative edge. Drawing roots from World War Two, American strategic thinking coalesced around high-technology air power for battlefield advantage during this time period. To date, the "United States has come to treat air superiority as a necessity, and built such capable air forces that no enemy aircraft has killed U.S. ground troops since 1953."¹²

Leadership Averse to Casualties. The creation of high-technological warfighting capabilities is strongly correlated with the desire of U.S. military and civilian leadership to minimize U.S. casualties during combat operations. Building from the liberal democratic belief of the salience of the individual and the all-volunteer force structure of the American military, this attitude seems highly logical. Consequently, American military and civilian elites have repeatedly noted their desire to minimize U.S. losses when engaged in confrontation.

Despite empirical evidence that challenges this claim, the notion that U.S. strategic culture is unwilling to accept loss has become so pervasive in the international arena that adversarial leaders appear willing to bet on U.S. non-intervention given an opponent's ability to inflict casualties on U.S. forces.¹³ Such was the mindset of Saddam Hussein in 1991, Slobodan Milosevic in 1999, and Osama bin Laden in 2001, all of whom concocted strategy around the core belief that the United States "lacked the moral courage to face a deadly military confrontation."¹⁴ Today, these perceptions can be found throughout statements by officials from the People's Republic of China (PRC) regarding the U.S. commitment to defend Taiwan.¹⁵

Overwhelming Firepower and Direct Engagement. A country rich in wealth and material resources, the United States has embraced the use of overwhelming firepower to defeat its



adversaries in direct confrontation. Concurrent with leadership's desire to avoid casualties, the "American way in warfare [is] to send metal in harm's way in place of vulnerable flesh."¹⁶ This philosophy has prompted enormous investment in standoff weapons systems that are capable of delivering unprecedented amounts of firepower to virtually any location on Earth with a high degree of expediency and accuracy. Capitalizing on comparative advantages in manufacturing and resources, the "strategy of attrition and annihilating the enemy with firepower was the best way to transform the nation's material superiority into battlefield effectiveness."¹⁷

The Disconnect Between U.S. Strategic Culture and Missile Defense Policy Outputs

Taken in isolation and in combination, nearly all facets of U.S. strategic culture point decisively toward a comprehensive approach to missile defense policy. More than a simple political or military consideration, Michael Rühle, head of the Climate and Energy Security Section at NATO, went so far as to describe the U.S. pursuit of missile defense as a "firm part of its national 'strategic culture.'"¹⁸ This linkage can be found in both overarching categories of U.S. strategic culture, the collective social attitudes regarding security outputs and their manifestations in the American way of war.

Socially, all elements of the American national style contribute to broad support for the pursuit of comprehensive damage limitation architectures and rejection of MAD. An unwavering, collective optimism and a problem-solving ethos would seem to reject the notion that the challenge of defeating a large-scale missile attack is outside of American technological feasibility. Accepting the premise that mutual vulnerability is a predetermined, unassailable structural condition necessary for the deterrence of other great powers is highly incongruous with the U.S. approach to nearly all other security problems. This confident mentality is in opposition to the logical-analytical cognitive style of the U.S. approach, where the "linear process of discovery" fuels continued optimism in the ability to solve all problems with sequential thought.¹⁹ Finally, the positive role of machines would further support an engineering approach to the existential threat of missile attack on the U.S. homeland, harnessing the vast industrial potential of America to overcome a geopolitical hurdle through the consistent logic of man-made machinery.

The American way of war is also highly congruous with broad-scope missile defense efforts. Obviously, the emphasis on technological overmatch precludes any perception of vulnerability to adversary capabilities as a desirable state of being. In virtually every other warfighting domain, the United States has invested enormous sums into maintaining technical dominance through defense innovation.²⁰ Speaking to a virtual defense conference, Heidi Shyu, the Under Secretary of Defense for Research and Engineering, exemplified this approach: "We cannot afford a leveling of technology advantage.... We must leverage the incredible amount of technology innovation across our nation to give our [sic.] leap-ahead capabilities to solve tough operational challenges."²¹ While the technological challenge of homeland ballistic missile defense (BMD) is undoubtedly significant, the barrier has proven insufficient for



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previous military pursuits of technological superiority, including national-scale endeavors such as the Manhattan Project.

Coupled with the desire to maintain a substantial technological edge in the U.S. approach to war is a leadership aversion to heavy casualties. The U.S. military has spent considerable sums in order to prosecute warfare with minimal risk to the warfighter, including an enduring emphasis on airpower, unmanned aerial vehicles (UAVs), long-range PGMs, theater missile defense, and more. While there are unquestioned tactical and strategic benefits to all of these innovations, official statements regarding such technology consistently include reference to their value in ensuring the safe return of deployed personnel.²² In the case of homeland BMD, the amount of potential military and civilian casualties associated with a deterrence failure is staggering. The utility of damage limitation measures in reducing U.S. loss of life in the instance of a deterrence failure has been acknowledged in declaratory policy by more than two decades worth of presidential administrations. The diverse suite of threats and willingness of U.S. adversaries to employ such capabilities increases the likelihood of a deterrence failure, lending further credence to a pursuit of more expansive BMD. The demonstrated efforts of U.S. military and civilian leadership to minimize casualties in combat operations would appear to justify bearing the immense financial cost necessary to ensure the safety of all Americans. Thus, it is striking that the “hostage exchange” of American citizens consistent with mutual vulnerability ever took hold in a culturally hostile environment.

Broad homeland missile defense would further allow for the employment of the American style of overwhelming firepower through direct engagement and leveraging of its industrial and material superiority. Previous conflicts have seen the wholesale inability of U.S. adversaries to hold any domestic infrastructure or power projection targets at risk. The missile age has shattered this perceived sanctity of the American homeland. Targeted missile strikes against several key U.S. ports would, at the very least, delay the ability of U.S. ground and naval forces to respond to aggression against allies in Europe or Asia. Obstructing the deployment of these forces would prevent the leveraging of the full weight of U.S. conventional firepower superiority in a given battlespace. Thus, more comprehensive homeland U.S. missile defense would potentially deny an adversary the confidence in limited missile strikes designed to limit the safe movement of U.S. or allied forces to a battlefield.²³

Exploring the Disconnect

The clash between U.S. strategic culture and its missile defense policies necessitates further examination. Nearly all salient pillars of American strategic culture decisively point to building comprehensive homeland BMD and rejecting mutual vulnerability required by the philosophy of MAD. Rühle echoes this view when examining EU attitudes of U.S. missile defense efforts: “Against this background [U.S. strategic culture], European advice to the United States to remain in a permanent state of calculated—“stabilizing”—vulnerability is likely to fall on deaf ears.”²⁴ Nevertheless, neither unlimited homeland BMD nor a wholesale rejection of mutual vulnerability has been uniformly supported across three-quarters of a



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century of missile defense policymaking. Of course, it is unrealistic to assume that a “big idea,” to borrow a term from Colin Gray, such as strategic culture will be a panacea for predicting state behavior in all circumstances.²⁵ Humans have yet to assemble a theory of security decision-making that forecasts with absolute precision. Still, the fact that the disconnect between U.S. strategic culture and BMD practice has persisted for so long merits a deeper dive to understand why.

Policy is Derived from Compromise. Despite the immense financial resources of the American system, the federal government operates under a condition of scarcity. There exists a finite pool of resources, including money, personnel, and time, that can be allocated to a myriad of agencies and projects. Consequently, goals that align perfectly with a given state’s strategic culture may not be actualized due to the constant need to balance hundreds of other simultaneous priorities. Gray describes this condition as a “negotiated outcome” where the “pure flame of strategic culture is certain to be dimmed by the constraints imposed by scarce resources and competing agencies.”²⁶ U.S. missile defense policy is no exception to this rule – it suffers from consistent politicization and strongly divergent preferences within the government system and from outside interest groups. Most prominent among these interest groups are the scientific community and arms control advocates. Many of their members have lobbied against missile defense development since its inception.²⁷ Despite Pew polling showing that the arguments for a national missile defense system were more compelling than those against, the American populace does not support homeland BMD enough to change the status quo.²⁸ Under these limits, a “security community can behave in ways massively contrary to the strategic preferences implied by its dominant strategic culture.”²⁹

Given the nature of the U.S. pluralistic system, Congress has most often opted for a compromise to satisfy both camps – a limited system to assuage the fears of destabilization, but one that can still be claimed as “progress” to the general public by protecting against potential rogue states and accidental launches.³⁰ These compromises are often driven by a small, but highly influential, cadre of “easy deterrence” elites who regard missile defense development as a threat to the predictable function of mutual deterrence through vulnerability.³¹ Unsurprisingly, such compromises have repeatedly hamstrung national missile defense development by impeding any concerted effort to innovate beyond the limited or regional level.

Lack of Threat Immediacy. The geographic isolation of North America has shielded American citizens from the nightmares of interstate warfare for the better part of its existence. Despite the advent of long-range missiles removing the barriers of the twin oceans, these threats remain highly conceptual. The dissolution of the Soviet Union and period of unquestioned American hyperpower that followed likely downplayed the possibility of nuclear ICBM attack in the collective American psyche. Hence, it is most plausible that the true gravity of this hazard will remain a distant concern in the minds of most Americans, until such time as the threat materializes on U.S. soil.³² While the Russian invasion of Ukraine has



reignited national attention on the threat of the Russian nuclear force posture, this threat is still “far away” and difficult to internalize as a serious probability.

At the macro level, this issue can be explained by one of the most consistent findings of cognitive psychology: the inability of humans to assess risk accurately. Overconfidence in a positive outcome, known as optimistic bias, is described by Nobel Prize winning economist Daniel Kahneman as the “most significant of the cognitive biases” thanks to the risks it poses to informed decision-making.³³ In the case of the Russian and Chinese nuclear arsenals, some elements of familiarity bias may work to decrease the probability that the threat will ever materialize. This bias refers to the “comfort, affiliation, or some other type of cognitive bond” that occurs with topics or entities that an individual has repeated exposure to, such as the threat of Soviet nuclear attack during the 20th century.³⁴ While there were numerous instances of close calls during the Cold War, the ability of deterrence to hold in all previous circumstances has perhaps built a powerful connection between mutual vulnerability and the “success” of nuclear deterrence.

Several elements of U.S. strategic culture may also reinforce the inability of most to accurately assess the dangers posed by adversary missile arsenals. Enduring American norms of optimism and ethnocentrism possibly encourage overconfidence in the universality of the U.S. approach to nuclear war and the ability of deterrence to hold. This issue has plagued U.S. foreign policy since the Cold War, when decision-makers “declined to appreciate the Soviet Union as a culturally, historically unique adversary unlikely to prove responsive to American political-military desiderata—no matter how eloquently, or persistently, expressed.”³⁵ As idealistic as these notions may seem, the “hubris regarding our master of nuclear deterrence ‘stability’ ... built on the demonstrably false assumption that Washington’s interpretation of what is rational and sensible also will be the basis of our opponents’ behavior” remains in some elements of the defense community today.³⁶

Image Perception and Manipulation. During the Cold War, the foundational debate about the requirements of superpower deterrence between Thomas Schelling and Herman Kahn revealed deeply held American reservations regarding any measures that could enable further nuclear employment in war. Kahn’s approach, emphasizing the need for damage limitation capabilities to make the threat of nuclear use more credible to the Soviets, was sharply criticized as being “cavalier” or “jocular” about the prospect of nuclear war.³⁷ Schelling’s recommendation of mutual vulnerability through a “balance of terror” did not receive the same criticism, despite the wholesale rejection of any defensive abilities for the American public and implicit targeting of Soviet noncombatants.

With this domestic base laid, international criticism became even more poignant. Soviet protests over U.S. ABM efforts consistently portrayed the defensive shield as merely a pretext to launch a first strike and retain the ability to survive retaliation. Ignoring Soviet damage limitation efforts, which exceeded those of the United States during the Cold War, “easy deterrence” theorists took such statements at face value and amplified the concerns that missile defense would undermine strategic stability and legitimize nuclear warfighting.



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Contemporary U.S. adversaries have continued this narrative, repeatedly advancing claims that U.S. missile defense efforts are a means to grant the U.S. military freedom of unilateral action and enable further “imperialism.” Such assertions are often accompanied by proclamations that the U.S. “missile shield” is solely designed to enable “a surprise missile-nuclear strike in any region of the world, with no punishment” in a manner reminiscent to the bombings of Hiroshima and Nagasaki.³⁸

Recent revelations regarding the scale of Russian hybrid warfare efforts, including liberal use of disinformation campaigns to undermine U.S. domestic and international standing, amplify the possibility that foreign actors have played an influential role in shaping the missile defense narrative. The 2022 *Annual Threat Assessment of the U.S. Intelligence Community* describes Russia’s global influence operations as a multi-domain enterprise designed to “divide Western alliances, and increase its sway around the world, while attempting to undermine U.S. global standing, amplify discord inside the United States, and influence U.S. voters and decision-making.”³⁹ Such efforts almost certainly extend to missile defense, where previous friction between U.S. and EU policy may be exploited to drive a wedge into the NATO alliance structure.

Conclusion

There is a striking incongruity between U.S. strategic culture and its missile defense policy. The American national style is characterized by an optimistic and problem-solving mindset, logical-analytical cognitive style, and positive role of machines. These concepts are reflected in the American way of war, which is technologically driven, casualty averse at the leadership level, and firepower-focused with an emphasis on direct engagement over stratagem. Taken at face value, these factors would strongly indicate a preference for comprehensive deterrence by denial measures, most prominently homeland BMD, to protect American lives in the case of deterrence failure or catastrophic accident. However, such preferences have failed to consistently materialize over three-quarters of a century of missile defense policymaking. Instead, the United States has often settled for a strategy of mutual vulnerability synonymous with the theory of Thomas Schelling’s “balance of terror” and Robert McNamara’s MAD philosophy. While the United States has slowly accepted more expansive attitudes regarding BMD and “rogue states,” MAD continues to dominate the approach to Russian and Chinese missile arsenals. This can be found most prominently in U.S. declaratory policy regarding the targets of the Ground-based Midcourse Defense (GMD) system, claims of destabilization or negative effects on “strategic stability,” and action-reaction cycle-based theories of Russian and Chinese nuclear modernization as a direct result of U.S. missile defense despite all empirical evidence to the contrary.

Despite little cultural support for the MAD approach and its corresponding emphasis on mutual vulnerability, this concept has disproportionately guided U.S. damage limitation policy and its corresponding discourse in many corners of the defense community. Three possible explanations for this incongruity were advanced by this monograph, including the



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requirement of compromise in forming policy in a pluralistic democracy, the lack of perceived ballistic missile threat immediacy by the general American public, and the concerted effort of U.S. adversaries to manipulate the international and domestic perceptions of U.S. missile defense efforts. Future studies should examine further reasons for this disconnect, potentially even offering new insights into American strategic culture to remedy the incongruity.

The continuity of mutual vulnerability despite its inherent conflict with U.S. strategic culture is nothing short of extraordinary. The end of the Cold War and dawn of a new, highly complex security environment have failed to eradicate MAD concepts from discourse over great power competition with Russia and China. While the United States has slowly expanded its rudimentary homeland BMD deployments in the face of expanding regional threats, the specter of MAD continues to dissuade policymakers from adopting a more comprehensive role. Discarding Cold War-era theories of strategic stability and bringing U.S. missile defense policy to a state of harmony with U.S. strategic culture will keep America safer in an ever more unpredictable international security environment.

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¹ Keith B. Payne, *Shadows on the Wall: Deterrence and Disarmament* (Fairfax, VA: National Institute Press, 2020), pp. 127–30.

² Dima Adamsky, *The Culture of Military Innovation: The Impact of Cultural Factors on the Revolution in Military Affairs in Russia, the US, and Israel* (Stanford, CA: Stanford University Press, 2010), p. 81.

³ Colin S. Gray, "The American Way of War," in *Rethinking the Principles of War*, ed. Anthony D. McIvor (Annapolis, MD: Naval Institute Press, 2005), p. 29.

⁴ Jeannie L. Johnson, "Fit for Future Conflict? American Strategic Culture in the Context of Great Power Competition," *Journal of Advanced Military Studies* 11, no. 1 (Spring 2020), p. 193.

⁵ Adamsky, *The Culture of Military Innovation*, p. 18.

⁶ *Ibid.*, p. 76.

⁷ William Kincade, "American National Style and Strategic Culture," in *Strategic Power: USA/USSR*, ed. Carl G. Jacobsen (New York: St. Martin's Press, 1990), p. 26.

⁸ Miriam D. Becker, "Strategic Culture and Ballistic Missile Defense: Russia and the United States" (Master's, Monterey, CA, Naval Postgraduate School, 1993), p. 54, available at https://calhoun.nps.edu/bitstream/handle/10945/39769/93Jun_Becker_M_D.pdf?sequence=1&isAllowed=y.

⁹ Thomas G. Mahnken, "United States Strategic Culture," in *Comparative Strategic Cultures Curriculum Project: Assessing Strategic Culture as a Methodological Approach to Understanding WMD Decision-Making by States and Non-State Actors*, ed. Jeffrey A. Larsen (Defense Threat Reduction Agency Advanced Systems and Concepts Office, 2006), p. 12, available at <https://irp.fas.org/agency/dod/dtra/us.pdf>.

¹⁰ Kincade, *op. cit.*, p. 26.



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¹¹ Mahnken, op. cit., p. 12.

¹² “Defense Primer: United States Airpower” (Washington, D.C.: Congressional Research Service, October 26, 2021), p. 1, available at <https://sgp.fas.org/crs/natsec/IF10546.pdf>.

¹³ Peter Feaver and Christopher Gelpi, “How Many Deaths Are Acceptable? A Surprising Answer,” *The Washington Post*, November 7, 1999, available at <https://www.washingtonpost.com/wp-srv/WPcap/1999-11/07/061r-110799-idx.html>.

¹⁴ Richard A. Lacquement Jr., “The Casualty-Aversion Myth,” *Naval War College Review*, vol. 57, no. 1 (2004), p. 10.

¹⁵ Keith B. Payne, *The Fallacies of Cold War Deterrence and a New Direction* (Lexington: The University Press of Kentucky, 2001), pp. 129, 147–48.

¹⁶ Gray, op. cit., p. 30.

¹⁷ Adamsky, op. cit., p. 78.

¹⁸ Michael Rühle, “U.S. Strategic Culture and Ballistic Missile Defense,” *National Institute for Public Policy Information Series*, no. 466 (September 3, 2020), p. 2, available at <https://nipp.org/wp-content/uploads/2021/03/IS-466.pdf>.

¹⁹ Adamsky, op. cit. p. 76.

²⁰ Cheryl Pellerin, “DOD Embracing Innovation to Fuel Military Overmatch against Adversaries,” U.S. Army, May 4, 2017, available at https://www.army.mil/article/187213/work_dod_embracing_innovation_to_fuel_military_overmatch_against_adversaries.

²¹ David Vergun, “DOD in Search of Disruptive Technologies That Will Enable the Warfighter,” U.S. Department of Defense, March 8, 2022, available at <https://www.defense.gov/News/News-Stories/Article/Article/2959378/dod-in-search-of-disruptive-technologies-that-will-enable-the-warfighter/https%3A%2F%2Fwww.defense.gov%2FNews%2FNews-Stories%2FArticle%2FArticle%2F2959378%2Fdod-in-search-of-disruptive-technologies-that-will-enable-the-warfighter%2F>.

²² Mark A. Welsh III, “Global Vigilance, Global Reach, Global Power for America: The World’s Greatest Air Force-- Powered by Airmen, Fueled by Innovation,” *Air & Space Power Journal*, March 2014, pp. 6–7.

²³ Jonathan Trexel, “Denying North Korea,” in *Deterrence by Denial: Theory and Practice*, ed. Andreas Wegner and Alex S. Wilner (New York: Cambria Press, 2021), p. 149.

²⁴ Rühle, op. cit., p. 4.

²⁵ Colin S. Gray, “Out of the Wilderness: Prime-Time for Strategic Culture,” in *Comparative Strategic Cultures Curriculum Project: Assessing Strategic Culture as a Methodological Approach to Understanding WMD Decision-Making by States and Non-State Actors*, ed. Jeffrey A. Larsen (Defense Threat Reduction Agency Advanced Systems and Concepts Office, 2006), p. 22.

²⁶ *Ibid.*, p. 25.

²⁷ Becker, op. cit., pp. 67–68.

²⁸ “Modest Support for Missile Defense, No Panic on China: Other Important Findings and Analyses,” Pew Research Center, June 11, 2001, available at <https://www.pewresearch.org/politics/2001/06/11/other-important-findings-and-analyses-10/>.

²⁹ Colin S. Gray, “Strategic Culture as Context: The First Generation of Theory Strikes Back,” *Review of International Studies* 25, no. 1 (1999), p. 64.

³⁰ “Missile Defense, the Space Relationship, & the Twenty-First Century” (Washington, D.C.: Institute for Foreign Policy Analysis, 2009), pp. 68–69, available at http://www.space-library.com/0902IFPA_IWG2009.pdf.

³¹ Payne, *Shadows on the Wall*, p. 65.

³² Op. cit., p. 80.



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³³ Daniel Kahneman, *Thinking, Fast and Slow* (Toronto: Doubleday Canada, 2011), p. 255, available at https://archive.org/details/thinkingfastslow0000kahn_b1q8.

³⁴ Casey L. Smith, "The Effects of Familiarity and Persuasion on Risk Assessment" (Doctoral Dissertation, Daytona Beach, Embry-Riddle Aeronautical University, 2012), p. 36, available at <https://commons.erau.edu/cgi/viewcontent.cgi?article=1130&context=edt>.

³⁵ Colin S. Gray, "Nuclear Strategy and National Style" (Washington, D.C.: Defense Nuclear Agency, July 31, 1981), p. 68, available at <https://apps.dtic.mil/sti/pdfs/ADA133216.pdf>.

³⁶ Payne, *The Fallacies of Cold War Deterrence and a New Direction*, p. xiii.

³⁷ Keith B. Payne, *The Great American Gamble: Deterrence Theory and Practice from the Cold War to the Twenty-First Century* (Fairfax, VA: National Institute Press, 2008), pp. 36–39.

³⁸ "Russian General: US Needs Missile Shield for Military Supremacy over Russia, China," TASS, October 11, 2016, available at <https://tass.com/politics/905572>.

³⁹ "Annual Threat Assessment of the U.S. Intelligence Community" (Washington, D.C.: Office of the Director of National Intelligence, February 2022), p. 12, available at <https://www.dni.gov/index.php/newsroom/reports-publications/reports-publications-2022/item/2279-2022-annual-threat-assessment-of-the-u-s-intelligence-community>.

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