Journal of Military and Strategic Studies

VOLUME 24, ISSUE 3

Journal of Military and Strategic Studies 2025 Award of Excellence[1]

What Luck Has to Do With It: Understanding the Role of Nuclear Luck in Decision-Making

Tyrus Tibor Kalanyos[*]

[1] Honourable mention.

[*] Tyrus Tibor Kalanyos, graduate student at the Norman Paterson School of International Affairs at Carleton University.

ISSN : 1488-559X

Introduction: A Thesis on Nuclear Luck and Decision-Making

It is due to luck that the history of humanity did not end decades ago. Since the end of the Second World War and the start of the Nuclear Age, there have been numerous cases of nuclear near-use.[2] Cases of near nuclear use, meaning when nuclear weapons were credibly and notably considered as a course of action for one reason or another, are of special concern due to the closeness that the world could have come to a nuclear confrontation, attack, or war. The destructive consequences of nuclear exchanges are terrible; however, so far, there has been no case of actual nuclear use, only near-use. While scholars have debated why no nuclear exchange has happened, some academics, decision-makers, and military officials argue that it is due to "luck."[3] More specifically, nuclear luck is the idea that a nuclear confrontation or strike was prevented not entirely due to organizational methods or safety procedures, but rather due to uncontrollable and unpredictable luck. However, this raises an extremely concerning point. If nuclear luck does exist, and is a reason why there has not been an annihilation of the world yet, it raises concerns about how safe the world is from nuclear weapons. Similarly, if one were to experience nuclear luck firsthand, that would potentially be even more alarming and an extreme reminder of the great power behind nuclear weapons. As such, this paper asks the research question of: how do experiences with nuclear luck affect decision-makers and their process regarding nuclear security?

The research question of this paper touches on the nature of nuclear weapons, their safety and the decision-making process that mostly controls them, and what luck has to do with it. As such, this paper is heavily inspired by scholarship on nuclear luck, primarily works by Benoît Pelopidas, whose arguments have refocused the academic conversations on nuclear weapons and their ability to remain under human control and reasonable management.[4] Moreover, this paper aims to add to this growing scholarship on nuclear luck through its research question. To do so, the preliminary answer to the

[2] Patricia Lewis, Benoît Pelopidas, and Heather Williams, "Too Close for Comfort: Cases of Near Nuclear Use and Options for Policy." *Chatham House,* 28 April 2014: p. 1, 7. https://www.chathamhouse.org/2014/04/too-close-comfort-cases-near-nuclear-use-and-options-policy.

[3] Benoît Pelopidas, "The Unbearable Lightness of Luck: Three Sources of Overconfidence in the Manageability of Nuclear Crises." *European Journal of International Security*, 2017, p. 462.

[4] Benoît Pelopidas, "A Bet Portrayed as a Certainty: Reassessing the Added Deterrent Value of Nuclear Weapons." Chp in *The War That Must Never Be Fought: Dilemmas of Nuclear Deterrence*. Hoover Institution, 2015.

research question and this paper's hypothesis is that experiences with luck could lead to less confidence in decision-making and policies on nuclear weapons, thus increasing risk-aversion and the possibility for collaboration and opening the process up to further biases and heuristics to rely on. For this hypothesis, the preliminary answer came about by connecting known heuristics and biases that arise in the decision-making process—such as availability heuristics and historical analogies—with experiences of luck. [5] Additionally, between these two hypotheses, it will also raise additional questions of whether luck matters in decision-making, and how, not just experiences, but perceptions of luck might shape policy.

Structure of the Article

To understand the research question and analyse the two hypotheses, this paper will first delve into the topic of nuclear luck. This section will highlight nuclear luck's conceptual and theoretical framework through a review of scholarship on the subject, while also providing a working definition of it for this paper. Next, the paper will go into essential contextual information of the time period, the early 1980s, to better analyse and consider the case studies used later to investigate the research question. In that section, the paper will especially note the nuclear doctrines and history of the main countries that are being analysed for their decision-making after experiencing nuclear luck: the United States of America and the Union of Soviet Socialist Republics. After that section, decision-making theories used in the subsequent analysis of the case studies and case countries will be explored and explained. This is then followed by the two case studies in question, the 1983 Soviet false alarm incident at the Serpukhov-15 base and the Able-Archer-83 incident. Within this section, the paper discusses what went wrong for there to have been a near-use incident and how nuclear luck may play a role. Next, the paper will closely analyse the case studies through the frameworks explained before to come to its findings of how nuclear luck may affect decision-makers and their processes through the studied 1983 war scare events. After that section, the paper will state the limits and scope of the paper's findings, which will be followed by the paper's implications of what its findings mean for the study and practice of nuclear security.

[5] Martha L. Cottam, Elena Mastors, Beth Dietz, and Thomas Preston. *Introduction to Political Psychology*. Vancouver, B.C: Langara College, 2007: p. 39.

Understanding Nuclear Luck:The Academic Battle Against Nuclear Luck

Since the Cuban Missile Crisis in 1962, those in politics and the military have noted the role of luck in nuclear crises.[6] Such individuals include Dean Acheson, the American special envoy to France during the Cuban Missile Crisis, Gerard C. Smith, the American chief delegate to the Strategic Arms Limitation Talks, General George Lee Butler, the last commander of the Strategic Air Command (SAC), Nikolaï S. Leonov, the *Komitet Gosudarstvennoy Bezopasnosti* (KGB—the foreign intelligence agency of the Soviet Union) lead for Cuba, and Robert McNamara, the former American Secretary of Defence during the actual Cuban Missile Crisis—who actually argued against luck's role in the crisis until later in life.[7] However, while some practitioners have given luck its due in understanding its role in crises and nuclear near-uses, scholarship and analytical work on the subject remains slim.[8] For a long time, most academics who study issues of inadvertent nuclear war and near-use have often danced around incorporating luck as a factor. Ironically enough, such academics often do so through a reluctance to accept that there can be an element of complete uncontrollability and unpredictability. For example, Thomas Schelling's *The Strategy of Conflict* contains a chapter called "The Threat That Leaves Something to Chance" that argues that while inadvertent war may contain elements of uncontrollability, there is still a level of probability attached to it, which is contrary to luck's nature as being unable to predict.[9] Indeed, Pelopidas and Kjølv Egeland have critiqued Schelling's arguments on the basis that he too quickly dismisses ideas of complete unknowns that cannot be controlled or predicted, even going so far as saying that his colleagues concerned with the circumstances of the Cuban Missile Crisis' success were "a bunch of nervous nellies."[10] Moreover, Schelling's dismissal of luck as a factor can also be seen through his views on brinkmanship.

---

[6] Benoît Pelopidas, "*Power, Luck, and Scholarly Responsibility at the End of the World(s)*." International Theory 12, no. 3 (7 August 2020): p. 462. https://doi.org/10.1017/s1752971920000299.

[7] Richard Ned Lebow and Benoît Pelopidas "Facing Nuclear War: Luck, Learning, and the Cuban Missile Crisis." *The Oxford Handbook of History and International Relations*, 16 August 2023: p. 712. https://doi.org/10.1093/oxfordhb/9780198873457.013.47.

[8] Lebow and Pelopidas, Facing Nuclear War, p. 713.

[9] Thomas C. Schelling. *The Strategy of Conflict.* Pickle Partners Publishing, 1960. p. 218-219.

[10] Benoît Pelopidas and Kjølv Egeland. "The False Promise of Nuclear Risk Reduction." International Affairs 100, no. 1 (8 January 2024): p. 354-355. https://doi.org/10.1093/ia/iiad290.

Brinkmanship, as understood through Schelling, is creating a perceived uncontrollable risk of war by letting "the situation get somewhat out of hand."[11] Schelling's work and understanding of brinkmanship have been influential in the field of security studies and have entrenched ideas of risk manageability into it. To go further, Reid Pauly and Rose McDermott offer a continuation of what brinkmanship can mean, stating that it transforms the bargaining field from one of power and interest to one of resolve by "manipulating the risk of disaster."[12] Accordingly, brinkmanship rewards less risk-averse states and decision-makers who are more willing or able to handle the increase in tensions and risk. Brinkmanship as a concept is understandably attractive through taking nuclear weapons from a passive ownership to an active one, and even more so now that scholars have found that just owning nuclear weapons is often not enough to produce significant leverage in the international arena.[13] Even so, the issue with brinkmanship in these cases is that it is greatly disrupted by introducing luck, especially nuclear luck, as playing a role. Brinkmanship, as described above, makes the assumption that leaders will act rationally when facing an increasingly risky and irrational environment, and does not consider a threat environment that is much more uncertain and prone to luck—or *unluck*—than thought. Brinkmanship and those who believe in it highlight the extent to which ideas of luck or nuclear luck are dismissed in conventional academic thought in security studies. Nonetheless, Pauly and McDermott do later argue in their article on nuclear brinkmanship that an essential aspect of it is how well one side can exploit the perception of danger and risk of the other side.[14]

This argument on the nature of brinkmanship is contestable in its applicability due to relying on, once again, ignoring the potential for luck and the complete uncontrollable and unpredictable to affect events and play a role through its assumption that there can be control over the perceptions of states. However, it does make an important observation by focusing on perceptions. In doing so, Pauly and McDermott touch on an essential aspect of this paper's approaches to nuclear luck and the decision-making process. While this will be expanded more in the decision-making framework section of the paper, a key part of studying nuclear luck is understanding that it cannot be something quantifiable,

[11] Schelling, *The Strategy of Conflict,* p. 233.
[12] Reid B. Pauly and Rose McDermott. "The Psychology of Nuclear Brinkmanship," *International Security* 47, no. 3 (1 January 2023): p. 11. https://doi.org/10.1162/isec_a_00451.
[13] Todd S. Sechser and Matthew Fuhrmann. "Crisis Bargaining and Nuclear Blackmail." *International Organization* 67, no. 1 (January 2013): p. 191. https://doi.org/10.1017/s0020818312000392.
[14] Pauly and McDermott,"The Psychology of Nuclear Brinkmanship," p. 20.

predicated, accounted for, or controlled. Pelopidas calls this the "unbearable lightness of luck," and it is what makes luck more difficult to study and understand, and consequently, why it has been overlooked by many scholars.[15] However, one way to look closer and effectively analyse luck, specifically nuclear luck, is by looking at how decision-makers have experienced it and how that then plays a role in future decision-making, if at all. Through this method, nuclear luck can take on a more understood and analytical form. As such, such an analysis with a focus on decision-makers is less about whether a case actually experienced nuclear luck, but whether those involved perceived nuclear luck as playing a role. Another reason why this paper's method of studying nuclear luck through the decision-making process is likely to be successful is highlighted by the works of some academics that touch on luck in nuclear security, albeit still facing the issues of the "unbearable lightness of luck."

The Incorporation of Nuclear Luck

One scholar who has incorporated luck into their academic work is Alan F. Phillips. In "Too Grave a Risk," he notes that there is a possibility that humanity has survived so far without a nuclear exchange due to luck.[16] However, Phillips soon attempts to quantify luck through a risk and probability calculation. By misunderstanding risk and luck to mean the same, Phillips' claim that luck could possibly have played a role in humanity's survival is much less effective. After all, if luck does have a role in humanity's survival, by making a risk and probability calculation, the author completely ignores the uncontrollable and unpredictable nature of luck that makes it so difficult to study. Similarly, Scott Sagan's *The Limits of Safety: Organizations, Accidents, and Nuclear Weapons*, makes a reference to luck as being a factor in the Cuban Missile Crisis, not causing a nuclear exchange.[17] Nevertheless, Sagan follows this claim up by writing that he does not wish to overstate the role of luck, due to the contribution of many other factors that had a role in shaping the crisis. Sagan's critique is a fair analysis of the role of luck in the Cuban Missile Crisis; however, as with other scholars, Sagan claims of a degree of controllability in the Crisis highlights a definition of luck that is

[15] Pelopidas, "The Unbearable Lightness of Luck," p. 249.
[16] Alan F. Phillips, "Too Grave a Risk," *Peace Review* 10, no. 3 (September 1998): p. 472. https://doi.org/10.1080/10402659808426186.
[17] Scott Douglas Sagan, *The Limits of Safety: Organizations, Accidents, and Nuclear Weapons*. Princeton, NJ: Princeton University Press, 2020. p. 154-155.

much too similar to the ideas of risk management. Additionally, while these scholars showcase the hesitancy of using nuclear luck in academic works, there are other scholars—aside from Pelopidas—who incorporate nuclear luck with close attention to its true nature.

One scholar who has incorporated and expanded the understanding of nuclear luck is Matthew Rendall in "Nuclear Weapons and Intergenerational Exploitation." In this article, Rendall touches on how the presence and continuing existence of nuclear weapons as part of states' policies does not guarantee safety and rather pushes the issue of a possible nuclear confrontation to later generations.[18] In making his argument, Rendall notes that deterrence, the long-standing theory that nuclear states will not attack another nuclear state under threat of nuclear retaliation, will eventually fail due to an accident or miscalculation happening, perhaps not in the "short or medium term" but certainly one day further down in the future.[19] As such, Rendall's article is premised on the idea that deterrence has worked for so long due to luck, and that one day that luck will run out and a miscalculation or accident will leave future generations paying the cost of extended deterrence. Deterrence is commonly seen as a concept and theory that relies on a rational calculation of costs, benefits, and risks.[20] However, although Rendall's argument, it highlights how disruptive nuclear luck is in the study of nuclear security by placing it beyond any manageability of risk in deterrence, as seen when he states that "evidence from the Cold War shows that we were lucky not to blunder into it."[21]

Comparably, Jennifer Mitzen and Randall Schweller's article, "Knowing the Unknown Unknowns: Misplaced Certainty and the Onset of War," also advances scholarship on nuclear luck by outlining three types of uncertainties. To go further, Mitzen and Schweller argue that uncertainty can be divided into risk, ambiguous uncertainty, and fundamental uncertainty.[22] Most important to this paper is Mitzen and Schweller's categorization of fundamental uncertainty. In this article, the authors claim

---

[18] Matthew Rendall, "Nuclear Weapons and Intergenerational Exploitation." *Security Studies* 16, no. 4 (6 December 2007): p. 526. https://doi.org/10.1080/09636410701741070.

[19] Rendall, "Nuclear Weapons,"p. 526.

[20] Andrew F. Krepinevich, "Critical Mass: Nuclear Proliferation in the Middle East." Center for Strategic and Budgetary Assessments, 2013: p. 7. https://doi.org/https://csbaonline.org/research/publications/critical-mass-nuclear-proliferation-in-the-middle-east.

[21] Rendall, "Nuclear Weapons,"p. 530.

[22] Jennifer Mitzen and Randall L. Schweller, "Knowing the Unknown Unknowns: Misplaced Certainty and the Onset of War." *Security Studies* 20, no. 1 (21 March 2011): p.23-24. https://doi.org/10.1080/09636412.2011.549023.

that fundamental uncertainty occurs when assumptions are removed, and no information exists to make a relevant decision—something entirely unknowable due to its indeterminate nature.[23] Through this categorization, the article touches on concepts of luck as a contributing factor in how the world operates and luck's potential—in this case, fundamental uncertainty's potential—to influence events. Through these two articles making clear distinctions in what they understand luck to be, they showcase the importance of understanding the difference between luck and other somewhat similar factors like risk and chance.

A Definition of Nuclear Luck

An essential aspect to understand about nuclear luck in this paper is differentiating it from similar yet different concepts and giving it a clear and working definition for this paper. As such, in this paper, luck can be understood as a part of risk, but specifically, the gap in risk management and awareness. Borrowing from Donald Rumsfeld, luck is when risk management or decision-makers miss both "unknown knowns" and "unknown unknowns."[24] Essentially, when something should have been prevented by risk management but slipped through the cracks and created a near-use or near-incident, and it didn't escalate due to external factors of the calculus used in risk management. This definition argues that there is a limit to risk management, and that is where luck will come into play. The working definition learns from the works of previous scholars touched on before, and highlights that, unlike chance and risk, luck is related but entirely different in its possibility to be calculated. Additionally, by embracing the difference in luck and risk and chance, it disrupts the prevalent *risk-based* thinking in nuclear security in favour of one that is also more aware of the world's uncertainty and luck, making the note of an argument that there is a factor beyond probability and control and that should be considered more in understanding events and decision-making.[25] Moreover, this understanding of nuclear luck opens up a further examination of what happened during certain moments of nuclear unease in history, particularly during the War Scare period in the early 1980s.

---

[23] Mitzen and Schweller, "Knowing the Unknown Unknowns," p. 25.

[24] Phil Faulkner, Alberto Feduzi, and Jochen Runde, "Unknowns, Black Swans and the Risk/Uncertainty Distinction." *Cambridge Journal of Economics* 41, no. 5 (August 2017): p. 1280. https://doi.org/10.1093/cje/bex035.

[25] Peter J. Katzenstein and Lucia A. Seybert, "Uncertainty, Risk, Power and the Limits of International Relations Theory." In *Protean Power: Exploring the Uncertain and Unexpected in World Politics*, p. 42. Cambridge University Press, 2018. https://doi.org/10.1017/9781108597456.003

Building the War Scare:

The 1980s and Their Historical Nuclear Background

With the American Presidential election voting in Ronald Reagan in 1980, and a transition happening from a sick and aging General Secretary of the Communist Party of the Soviet Union, Leonid Brezhnev, to Yuri Andropov, the two countries in the midst of the Cold War were experiencing great change.[26] The change the world was experiencing was one also of increased tensions and power rivalry between America and the Soviet Union. Much of the previous efforts for stable and working relationships between the two superpowers deteriorated quickly in the early 1980s, resulting in the War Scare period from about 1981 to 1984.[27] As Reagan became more aggressive in his posture with the Soviets, calling the country an "evil empire," the Soviet Union began to feel the pressure—a nuclear pressure.[28] Both countries also experienced events that added fuel to the frightened atmosphere within both states. One such event that is commonly raised when discussing the increased tensions during the War Scare period was the shooting of the Korean civilian airliner, KAL 007.[29] On 1 September 1983, KAL 007 flew into Soviet airspace and was subsequently shot down. The airline had a navigational error that caused it to enter the restricted airspace, and after a few warning shots, the Soviets crashed the plane and claimed 269 victims.[30] This event certainly communicates how governments and the military were tense and uneasy with one another during this period. However, more than just the KAL 007 event, the Soviet Union and America were also facing shifting nuclear doctrines and increasing destructiveness of nuclear weapons, with a stockpile that was equivalent to twenty billion tons of TNT.[31]

---

[26] Ruud van Dijk, Artemy M Kalinovsky, and Craig Daigle. "Nuclear Weapons and the Cold War." In *The Routledge Handbook of the Cold War*, 1st ed., Routledge, 2014: p. 286-287. https://doi.org/10.4324/9781315882284-27.

[27] Stephen J. Cimbala, "Nuclear Learning from the Past: 'Able Archer' and the 1983 War Scare." The United States, Russia and Nuclear Peace, 2020: p. 1–2. https://doi.org/10.1007/978-3-030-38088-5_1.

[28] Thomas R. Johnson. *Book IV: Cryptologic Rebirth, 1981-1989 American cryptology during the Cold War*, 1945-1989 § (1995): p. 264.

[29] Nate Jones, *Able Archer p. 83: The Secret History of the NATO Exercise that Almost Triggered Nuclear War*. New York: The New Press, 2016: p. 32.

[30] U.S. Senate, Dangerous Stalemate: Superpower Relations in Autumn 1983: A Report of a Delegation of Eight Senators to the Soviet Union, to the United States Senate § (1983). p. iv-v.

[31] Joseph Cirincione, *Nuclear Nightmares.* Columbia University Press, 2013.p. 52.

By 1983, the tension between the two countries, America and the Soviet Union, could be plainly seen through the large increases in the number of their nuclear stockpile. To exemplify, in 1983, America had 1,880 launchers, with 10,619 total warheads.[32] The bulk of the stockpile came from submarine-launched ballistic missiles (SLBMs), particularly the Poseidon C-3, as well as B-52s from air forces, which had 3,040 and 2 892, respectively, total warheads. On the other hand, the Soviets had 2 512 launchers, with around 9 002 total warheads. For the Soviets, the bulk of this stockpile came from their intercontinental ballistic missiles (ICBMs), particularly the SS-18 and SS-19, which had 3,080 and 1,980 respectively, total warheads.[33] While both countries had plenty of nuclear weapons and the vehicles to transport them, this paper's arguments on nuclear luck would argue that increasing a nuclear stockpile and relying on deterrence would ignore the possibility of luck and its consequences—the differences in options for potential retaliatory responses worried the Soviets and added fear to a first-strike capability.[34]

In late 1979, the North Atlantic Treaty Organisation (NATO) made the decision to modernise its intermediate nuclear missile force (INF) through introducing 572 new missiles to Europe by November 1983.[35] This decision was made in part due to the Soviets' SS-20 missiles, which had "very low vulnerability, high accuracy, and a great range, not only over all of Europe but over the Middle and Near East and much of the Mediterranean."[36] The SS-20's possibilities as a way to conduct nuclear war, either limited or otherwise, proved to be enough of a motivation for America and its NATO allies to extend their nuclear deterrence capabilities. However, the deployment of these new missiles, largely Pershing II, an intermediate-range ballistic missile, and Gryphon, a ground-launched cruise missile, caused further increased tensions on the Soviet side. While America stated that the Pershing II's range was 1,800 kilometres, some Soviet analysts believed their range was actually around 2,500 kilometres.[37] Furthermore, the range was such an issue because it could reach the leadership centre of the Soviet Union, Moscow, and could do so quickly, enabling NATO and America to potentially do a first

[32] Cimbala, "Nuclear Learning from the Past,"p. 16.
[33] Cimbala, "Nuclear Learning from the Past," p. 16.
[34] Pelopidas, "A Bet Portrayed as a Certainty," p. 15.
[35] Cimbala, "Nuclear Learning from the Past," p. 3.
[36] John G. Hines. "Interview with Lieutenant General Gelii Viktorovich Batenin." In *Soviet Intentions 1965-1985: Volume II Soviet Post-Cold War Testimonial Evidence*, 6 August 1993: p. 8.
[37] Jones, "*Able Archer,"*p. 20-21.

strike against it. Moreover, even the Gryphon missile could reach Moscow, albeit not nearly at the speed of the Pershing II missiles.[38] Nevertheless, the missiles and the tensions that brought them can be more closely examined through a more state-level analysis.

The American Nuclear Context

Under Reagan, in his first term as President of America, the US held its relations with the Soviet Union through two tracks, one being the expected diplomatic relations that encouraged arms control negotiations, while the other was a much more aggressive and covert track to exploit Soviet perceptions.[39] The aggressive track can be seen through Reagan's more public and extreme denunciations of the Soviet Union and general threatening manner, which aimed to achieve "peace through strength," and is shown by how he increased American military spending by 18.1 percent in 1983, with a proposed 2.7 trillion USD defence budget for 1982 to 1989.[40] Additionally, this increased build-up also exemplifies the American strategy that ignored détente in favour of greater capabilities to respond to situations, including nuclear supremacy.[41] Moreover, on the more covert side of his aggressive track, Reagan also implemented psychological warfare against the Soviets. For example, the Strategic Air Command (SAC) would constantly provoke the Soviets through flying B-52s, nuclear-capable aircraft, very close or sometimes within Soviet airspace on its Eastern Bloc borders.[42] Similarly, the US Navy would also conduct naval exercises close to ports of strategic importance to the Soviets, like the Murmansk coast and in the Sea of Okhotsk.[43] These aggravations and provocations aimed to show American strength to deter the Soviet Union, while also messing with their psychology and instilling fear of a potentially more war-prone leadership in America. The latter part of this strategy, as explained soon in the subsequent Soviet-focused side of the history section in this paper, was extremely successful—too successful. Nevertheless, while America wanted to cause some nervousness in the Soviet

---

[38] Jones, "*Able Archer 83,"* p. 20-21.

[39] Benjamin Fischer, "Threat Perception, Scare Tactic, or False Alarm?: The 1983 War Scare in US-Soviet Relations," CIA Center for the Study of Intelligence, 1996: p. 5. https://doi.org/10.2307/jj.26193260.12.

[40] Jones, "*Able Archer,"* p. 20-21.

[41] President's Foreign Intelligence Advisory Board, *The Soviet "War Scare"* § (1990). p. 49.

[42] Johnson, *" Cryptologic Rebirth,"* p. 318.

[43] Johnson, "*Cryptologic Rebirth,"* p. 318.

Union, that did not mean that America was not also worried about a potential nuclear confrontation.

The American early warning system during the 1980s was largely based on four command posts: the North American Aerospace Defence Command (NORAD), SAC, and the two National Military Command Centres (NMCCs) at the Pentagon and at Fort Ritchie.[44] Once one of these posts picks up on an early warning, the Emergency Action Conferences take place. Should the missile affect North America, the NORAD chief begins a Missile Display Conference (MDC) to understand the validity and level of threat. Should the defence seem credible, a second MDC occurs with more officials, which then transforms into a Threat Assessment Conference (TAC) with even more senior-level officials if the threat remains to be an actual danger. Finally, if TAC does find the threat credible and actionable, the President of America is brought into the Missile Attack Conference (MAC). While a MAC has never happened, there have been plenty of MDCs throughout the early 1980s.[45] For example, according to the American Department of Defence's "Narrative Summaries of Accidents Involving U.S. Nuclear Weapons, 1950–1980 (interim)," in 1981 there were 2,851 routine MDCs, then 3,716 in 1982, and 3,294 in 1983—a great increase from the 1,544 routine MDCs in 1979.[46] More specifically, in 1981, 186 MDCs were to evaluate possible threats, then 218 in 1982, and then 255 in 1983—also an increase from only 78 of these MDCs in 1979. Clearly, these statistics showcase an America that was facing a lot more threats in the early 1980s than before, adding to America's own worry of a nuclear exchange. Furthermore, TACs were also increasingly common, with one example being the NORAD faulty chip incident in June 1983.[47]

On 3 June 1980, SAC received an alarm from the NORAD headquarters warning that two SLBMs were targeting and on the trajectory to hit America.[48] SAC called NORAD to confirm the accuracy of this alarm, but when NORAD could not corroborate this claim, SAC ordered the alert B-52 air crews to begin preparation to head to the Soviet Union for

---

[44] Milton Leitenberg. "The Hazards of Operations Involving Nuclear Weapons during the Cold War." *Journal of Cold War Studies* 20, no. 3 (September 2018): p. 219. https://doi.org/10.1162/jcws_a_00826.

[45] Leitenberg, "The Hazards of Operations Involving Nuclear Weapons,"p. 219.

[46] Leitenberg, "The Hazards of Operations Involving Nuclear Weapons," p. 219-220.

[47] Comptroller General, *NORAD's Missile Warning System: What Went Wrong?: Report to the Chairman, Committee on Government Operations, House of Representatives* § (1981). p. 3.

[48] Charles Perrow, "*Normal Accidents*," Princeton University Press, 2011. p. 286.

a potential retaliatory attack. This event would only last three minutes and ended once it was clear that it was a false alarm from NORAD.[49] Later, it was found out that the cause of the event was due to a failure of a data communications interface at NORAD through its computer chip, and the false warning would occur again just three days later.[50] Nevertheless, this was a serious event that could have gone wrong in many ways, and is another contextual example of why America was also likely tense during this period. Events like these also explain in part why Reagan proposed his Strategic Defence Initiative (SDI) on 26 March 1983.

The SDI, nicknamed "Star Wars" by the public, was Reagan's plan to create a defensive shield for American land-based missiles through an interconnected system of a "ground and space-based, laser-armed antiballistic missile program."[51] Essentially, for Reagan, the SDI represented an opportunity to shift deterrence to a more defensive position and an eventual path toward nuclear abolition, but that was not how the Soviets viewed the SDI. Only four days later, Andropov claimed that America was creating such a defence system so that it could prepare and enact a nuclear first-strike against the Soviet Union, which would not be able to enact retaliatory strikes due to the SDI.[52] Later, Andropov and the Soviets accused the SDI of being a "bargaining chip" to blackmail them into giving up Soviet weaponry.[53] While Reagan responded by stating that if countries give up their nuclear weapons, he would share the SDI technology with them, to potentially prevent a future madman's behaviour. The SDI is what marks much of the tension and distrust between America and the Soviet Union during the early 1980s, with both not believing in what the other is saying, thinking, or planning. For America, while the SDI was largely created under Reagan's personal ambition for a world without the need to worry about a nuclear strike, it continues the example of how America also had building anxieties and fears over the future of nuclear diplomacy and any nuclear confrontation. Moreover, the SDI represents how America at the time believed that the Soviets were catching up, with a Joint Net Assessment claiming that while the Soviets have some advantages over America in their nuclear strategy, the Soviet Union is likely more "pessimistic" about its actual capabilities, and the overall nuclear strategic balance

[49] Perrow, "Normal Accidents," p. 286.
[50] Department of Defense. "False Alerts," Memorandum to President Carter, 17 July 1980. p. 2.
[51] Fischer, "Threat Perception, Scare Tactic, or False Alarm?: The 1983 War Scare in US-Soviet Relations," p. 17.
[52] Fischer, "Threat Perception," p. 17.
[53] Ronald Reagan. *An American Life*. New York: Simon & Schuster, 2011.p. 548.

remains stable.[54] Nonetheless, the Soviet reaction also highlights the necessity to understand what the Soviets were dealing with during the War Scare period.

The Soviet Nuclear Context

In late May 1983, Andropov announced at a KGB conference that America is making active preparations for a war—with a first-strike strategy being considered by the US—against the Soviet Union.[55] Indeed, with Andropov being elevated to General Secretary, the Soviet Union saw drastic increases in their nuclear capabilities.[56] The purpose of this was to ensure that the Soviet Union could withstand a first strike or military coercion enough to either threaten or use its deterrent missile capabilities. Subsequently, the build-up was successful in gaining some level of parity with the US by 1983, as highlighted in the previous section on the two countries' nuclear stockpiles. However, while the Soviet forces built enough to ensure retaliation after a first strike or nuclear confrontation, a part of the continuing anxieties that the Soviets faced were the different Soviet ideas of deterrence. The Soviets had two concepts of deterrence, with one being *sderzhivanie* (forestalling or avoiding) and the other being *ustrashenie* (intimidation).[57] Through these two different ideas of deterrence, the Soviet Union sought not just military and strategic parity, but political and ideological parity as well. Unfortunately for the Soviets, through Reagan's transformative idea of the SDI, it likely created greater worry that the US had the advantage in the *sderzhivanie* type of deterrence. Moreover, the aforementioned psychological warfare conducted against the Soviet Union also likely affected how balanced, and thus how tense, the Soviet ideas of deterrence were. Additionally, the Pershing II and Gryphon missiles likely also shifted Soviet perceptions on the state of deterrence to be more immediate and unbalanced, and with Soviet analysts estimating that the Pershing II missile likely covers more ground than the Americans say, the psychological warfare campaign only continued. One way to examine

[54] Department of Defense and Central Intelligence Agency, "US and Soviet Strategic Forces," Joint Net Assessment, 14 November 1983. p. 1-7.
[55] President's Foreign Intelligence Advisory Board, p. 53.
[56] Cimbala, "Nuclear Learning from the Past: 'Able Archer' and the 1983 War Scare," p. 14.
[57] Cimbala, "Nuclear Learning from the Past: 'Able Archer' and the 1983 War Scare," p.12.

these anxieties around nuclear security is by looking at Soviet military activities during the War Scare period.

From 1982 to late 1984, largely when Andropov was in power as the General Secretary, there were noted "unusual measures" that Western analysts believed would only make sense during a time of crisis.[58] This includes:

> "disruption of the normal troop rotation cycle for Soviet forces in Central Europe in 1984; updating civil defence procedures in the USSR from 1982 through 1984; in the spring of 1984 the first, and apparently only, time that Soviet military trucks were not sent to support the harvest since the end of World War II; and increased alert reactions even to routine NATO training from 1982 to 1984."[59]

This increase in military and security measures could be due to the conditions of Andropov's accession to power through an agreement with the military to increase their resources and modernise military organisation, plans, and readiness.[60] Moreover, this idea that the military build-up was not due to Soviet anxieties is something that was also argued by the then acting Director of the Central Intelligence Agency (CIA), John McMahon, who claimed that the Soviets were being performative and "putting on an appearance of bilateral tension so long as it appears that the US is the offending party."[61] Indeed, part of what made the War Scare into what it became is the American perception that the Soviets were not actually afraid or nervous of America, NATO, and its nuclear capabilities. Nonetheless, if the above-mentioned measures do not prove Soviet nuclear anxiety, then the Soviet Union's automatic launch system and its intelligence activities certainly make the case.

---

[58] Central Intelligence Agency, Chief, Office of Soviet Analysis, and Director, National Warning Staff, [names redacted]. "Comments on Memorandum of Lieutenant Perroots," Distributed by Fritz Ermarth to DCI and DDCI, Undated, circa 1989: p. 1432.

[59] Central Intelligence Agency, Chief, Office of Soviet Analysis, and Director, National Warning Staff, [names redacted], p. 1432.

[60] Central Intelligence Agency, Chief, Office of Soviet Analysis, and Director, National Warning Staff, [names redacted], p. 1432-1433.

[61] Jack Matlock, "Subject: American Academic on Soviet Policy," in Memorandum for National Security Advisor Robert. McFarlane Reagan Presidential Library, Matlock Files, Chron December 1983 [1 of 2], Box 2, 90888. 13 December 1983. p.3.

The Soviet automatic launch system was also called the "Dead Hand."[62] This system was designed to have SLBMs launch automatically based on seismic, light, and radiation sensors. The purpose of the Dead Hand was to launch a possible retaliatory strike on America in the case that the Soviet leadership were unable to do so instead, largely due to either death or disruption of communication systems. While the existence of the creation of the Dead Hand brings up worrying critiques from the nuclear luck point, which believes that unpredictable and uncontrollable events and accidents can happen, the concept exemplifies just how scared the Soviets were. With American decision-makers not being aware of the existence of the Dead Hand until much later, and the Soviets making no attempt at communicating it to others, the Dead Hand appears to line up with the irrationality seen in those with fear. After all, if the Dead Hand is supposed to provide a better position for the Soviets through such a deterrence, then its lack of public awareness is inexplicable when deterrence only *works* when others know of the potential negative consequences of attacking—showcasing just how tense the Soviets were during this period. Nevertheless, the Dead Hand was never completed nor implemented after being rejected by the Marshal of the Soviet Union, Sergey Akhromeyev, sometime after September 1984, although a similar system was later developed.[63] Nonetheless, the Dead Hand is not the only extreme example of the unease of the Soviet Union during this period.

Before becoming the General Secretary, Andropov was the KGB Chairman. In this position, in March 1981, Andropov made a speech to fellow KGB members saying,

> Intelligence service needs to learn to act in a more pointed, more accurate, faster way. Its objective is not to miss the military preparations of the enemy, and of the most important enemy in the first place, its preparations for a nuclear strike, and not to miss the real risk of the outbreak of war.[64]

---

[62] John G. Hines. "Interview with Viktor M. Surikov, Deputy Director of the Central Scientific Research Institute." *Soviet Intentions 1965-1985: Volume II Soviet Post-Cold War Testimonial Evidence*, 11 September 1993: p. 134.

[63] Hines, "Interview with Viktor M. Surikov," p. 134-135.

[64] Yuri Andropov, "The Results of the 26th Congress of the CPSU and Tasks for the Party Organization of the KGB." Ukrainian KGB Archive, 25 March 1981: p. 12

In this speech, Andropov makes the first claim that the Soviet Union must increase its intelligence capabilities to be better prepared for any surprise attack, including being prepared for a nuclear first strike. Moreover, this speech sets up the future creation of Operation VRYaN, which was the Russian acronym for *Raketno-Yadernoe Napadenie* (nuclear missile attack in English).[65] Operation VRYaN was established soon after the speech, in May 1981, and became the largest intelligence gathering operation during peacetime, and was aimed at detecting preparations for an outbreak of nuclear war.[66] The Operation had an estimated 200 workers who entered intelligence based on indicators into a centralised system to calculate a possible incoming attack.[67] Soon after its creation, Operation VRYaN became even more discussed and utilised in 1982 and 1983 under the "view of increasing danger of war unleashed by the U.S. and NATO."[68] Accordingly, Operation VRYaN gained a high priority designation in 1982, which then turned into an overriding high priority in 1983.[69] More specifically, in February 1983, over forty KGB station chiefs (*Rezident*) were sent a note to permanently increase their work on Operation VRYaN and to "work systematically to uncover any plans in preparation by the main adversary (USA)," and to "organise a continual watch to be kept for indications of a decision being taken to use nuclear weapons against the USSR or immediate preparation being made for a nuclear missile attack."[70] This statement was then followed by a list of possible indicators of nuclear attack for KGB agents to look out for, including:

> "...the collection of data on potential places of evacuation and shelter; an appraisal of the level of blood held in blood banks; observation of places where nuclear decisions were made and where nuclear weapons were stored; observation of key nuclear decision makers; observation of lines of communication; reconnaissance

[65] Nate Jones, "Countdown to Declassification: Finding Answers to a 1983 Nuclear War Scare." Bulletin of the Atomic Scientists 69, no. 6 (November 2013): p. 49-50. https://doi.org/10.1177/0096340213508630.
[66] Jones, "Countdown to Declassification:," p. 49-50.
[67] President's Foreign Intelligence Advisory Board, p. 44.
[68] Benjamin B. Fischer, *An Intelligence Monograph: A Cold War Conundrum: The 1983 Soviet War Scare* (1997): p. 5.
[69] Fischer, *An Intelligence Monograph,* p. 12.
[70] KGB Headquarters, Moscow. "Permanent operational assignment to uncover NATO preparations for a nuclear missile attack on the USSR," in *Comrade Kryuchkov's Instructions: Top Secret Files on KGB Foreign Operations, 1975-1985*. 17 February 1983: pp. 1-2.

on the heads of churches and banks; and surveillance of security services and military installations."[71]

After agents collect such indicators, the Operation is then supposed to calculate the Soviet Union's power relative to America, and if the rating is below forty percent, the KGB would inform the Politburo, the Soviet political leadership, and this would potentially be followed up with a Soviet first strike.[72] Significantly, the Operation calculated that the Soviet Union was forty-five per cent relative in power to America by 1984. Although it is worth noting that it is difficult to assess just how influential Operation VRYaN was on decision-makers. However, according to one former military official, Viktor M. Surikov, the policy in the Soviet Union had shifted to also consider preemptive strikes, as seen through a 1983 military exercise, Zapad West-83.[73] Moreover, through the extensive and important designation given to the Operation by the Soviet Union, Operation VRYaN represents just how afraid the Soviets were of a possible nuclear first-strike, and consequently, showcases the unease in the early 1980s. In addition, what the American context and Soviet context have in common is that both countries were experiencing some level of unease with the other, largely due to misperceptions. Nevertheless, while historians continue to debate just how tense and on edge the situation was in the early 1980s, this paper is more concerned with the perception of threat and unease that was highlighted just now. As perceptions play a key role in understanding decision-makers and their processes, this will help understand how nuclear luck affects it as well.

Understanding Decision-Makers and Making: Why Decision-Making

When discussing the Cuban Missile Crisis, Robert Kennedy mentioned that while many of the decision-makers involved were some of the smartest, talented, and capable individuals in the US government, if some of them were the President of America during the crisis, the world would have seen a nuclear war.[74] Indeed, while those making decisions of international and domestic security can all be clever and competent, the individual experience and psychology of people can shape judgments to create vastly different courses of action. This application of political psychology in international

[71] Jones, "Countdown to Declassification," p. 49-50.
[72] President's Foreign Intelligence Advisory Board, p. 45.
[73] Hines, "Interview with Viktor M. Surikov," p. 134-135.
[74] Cottam et al.,"*Introduction to Political Psychology,"* p. 101.

security and political decision-making argues that decision-makers and leaders have prior perceptions, biases, and principles that can change the direction of events and policies.[75] In this paper, the topic of nuclear luck requires a dissection of the political psychology of decision-making in order to better understand just how nuclear luck contributes to the aforementioned perceptions, biases, and principles—if it contributes at all. As such, in this section, the paper covers different conceptual frameworks of how decision-makers make their decisions and the political psychology behind them. Moreover, an understanding of the decision-making process and political psychology will aid in setting up how the later case studies showcase nuclear luck and what leaders and decision-makers took from that experience.

Conceptual Ideas of Decision-Making and Its Process

A part of understanding decision-making and its political and psychological process is that people's cognition, meaning their psychological processes that interact with the gain, planning, and application of knowledge, creates a system of behaviour and beliefs that constantly interacts with incoming information.[76] In politics, this system of beliefs and behaviour—as Alexander L. George put it—can be called a "cognitive map" or "operational code," and aids in analysing and describing a set of principles and decisions made in politics by decision-makers.[77] Additionally, political psychologists have researched how operational codes and cognitive maps tend to work through a set of different heuristics, as well as biases and schemas.

Heuristics are the inferential shortcuts people utilise to process large amounts of complex information, which is especially true for elite decision-makers.[78] On the other hand, schemas are a way people categorise information, as they represent the structure and knowledge that the cognitive system has for specific concepts, relations, memories, and ideas.[79] Finally, biases also play a role in decision-making, but unlike the other two, are more commonly known, with it being previously held and established beliefs that

[75] Michael D. Cohen. *When Proliferation Causes Peace: The Psychology of Nuclear Crises*. Washington, DC: Georgetown University Press, 2017: p. 30.
[76] Cottam et al., "*Introduction to Political Psychology,*" p. 39.
[77] Alexander L. George, "The 'Operational Code': A Neglected Approach to the Study of Political Leaders and Decision-Making," International Studies Quarterly 13, no. 2 (June 1969): p. 197. https://doi.org/10.2307/3013944.
[78] Cohen, "*When Proliferation Causes Peace,*" p. 31.
[79] Cottam et al., "*Introduction to Political Psychology,*" p. 44.

contribute to how the cognition system and operational code perceive incoming new information.[80] Between these three concepts in political psychology and decision-making it lays a foundation for subsequent theories of how elite leaders and decision-makers make their judgments and choices.

The Availability Heuristic

One concept in political psychology on the decision-making process that likely relates to this thesis on experiences with nuclear luck is the availability heuristic. The availability heuristic argues that people make an assessment of incoming information through past experiences.[81] According to this heuristic, instead of having to construct new ideas and potentially competing information, this mental shortcut allows people to look at what has empirically occurred to decide the best course of action, which usually comes from more critical, personal, and evocative memories. For this paper, the availability bias could be one explanation of why decision-makers may be affected by nuclear luck, an undoubtedly evocative experience if remembered as being a case of luck, and their subsequent decisions after encountering it. Moreover, this is especially true when looking at another aspect of the availability heuristic, which is "imaginability."[82]

Imaginability continues to utilise previous experiences and ideas, but in this process, it is done without a consideration of real likelihoods and probabilities. While this heuristic still considers possible outcomes, it relies less on plausibility in favour of what one can imagine occurring, either again or not. Thus, by disregarding traditional risk-management and probability concepts, it constructs an operational code or cognitive map that allows for luck to play more of a role in understanding future events and moments of decision-making.[83] While imaginability is useful in analysing the case studies and their respective decision-making, it is by far the only theory.

The Prospect Theory

Another idea in political psychology is the prospect theory. According to this theory, when an actor experiences something positive or a *gain* in their favour, it puts

[80] Pauly and McDermott, p. 30-31.
[81] Cohen, "*When Proliferation Causes Peace*,"p. 35.
[82]Cottam et al., "*Introduction to Political Psychology*," p. 39-40.
[83]Cottam et al., "*Introduction to Political Psychology,*" p. 39-40.

them in the domain of gains and encourages risk-averse behaviour that is hesitant to lose.[84] On the other hand, when one actor is experiencing negative gains and has only loss in their time horizon, they are in the domain of losses and are less prone to loss aversion, as the actor is encouraged to make riskier decisions to get out of this domain. As such, the prospect theory would argue that should an actor experience nuclear luck, they would likely be in the domain of gains and consequently, be more risk-averse, so as not to drop into losses. To explain, decision-makers are likely to be in the domain of gains, as nuclear luck, while a nuclear incident could have happened, it did not, and the nuclear peace continued. Nonetheless, the prospect theory also argues that for "experienced elites," meaning high-level established decision-makers, the aversion to risk is less than usual due to a history of risk calculus.[85] However, nuclear luck further disrupts this by introducing an element of fear that likely reinforces risk-aversion attitudes.

Fear is an incredibly evocative emotion that builds bias and alters the established memories that build schemas. Studies of the relationship between emotion and decision-making have found that fear does affect decision-making, with one such study finding that when individuals experience great uncertainty, essentially luck, it leads to risk-averse behaviour.[86] Moreover, if fear reinforces risk-averse decisions and attitudes, then those who experienced moments of nuclear luck and near-use will likely desire "restrained foreign policies," in an attempt to deal with that fear and prevent another similar event. While taking on such preventative measures runs counter to this paper's understanding of luck as being uncontrollable, unpredictable, and not manageable, those making such decisions likely operate in a field of risk management—a mistake that will be touched on later in the paper. Nevertheless, the fear factor in decision-making, while showing how it reinforces the prospect theory and ideas that an experience with luck leads to risk-averse behaviour, the concept of protean power makes a worthy addition to the discussion.

---

[84] Emilie Marie Hafner-Burton, Alex Hughes, and David G. Victor. "The Cognitive Revolution and the Political Psychology of Elite Decision Making," Perspectives on Politics 11, no. 2 (June 2013): p. 373-374. https://doi.org/https://www.jstor.org/stable/43280794.

[85] Hafner-Burton, Hughes, and Victor, p. 373-374.

[86] Jennifer S. Lerner and Dacher Keltner, "Fear, Anger, and Risk." Journal of Personality and Social Psychology 81, no. 1 (2001): p. 148, 155-156. https://doi.org/10.1037//0022-3514.81.1.146.

Protean Power

Protean power is a competing, yet supporting, concept with control power.[87] The idea of protean power is that it operates under an unknowable environment wherein risk-management means little—essentially operating within the realm of luck and uncertainty.[88] Whereas control power operates in a more certain environment, with calculations being standard. Notably, the two are not mutually exclusive, with protean power and control power interacting with one another to varying degrees.[89] Nevertheless, protean power, by operating with the understanding of uncertainty and luck, creates new power dynamics that create more innovative and improvisational responses, which understand that luck is a part of the process and how the world works. Moreover, the idea of *infrapolitics*, a concept that describes the quiet and flexible resistance in politics before control power comes into the equation, also highlights how protean power can be utilised in moments of uncertainty and luck by individuals quietly, but then has the potential to apply to higher levels of power.[90] Furthermore, this means that decision-makers who have experienced nuclear luck may operate under a protean power framework that encourages not just risk-averse behaviour—as the prospect theory and concepts of fear suggest—but also personal innovative and flexible behaviour that could translate into control-powered policies later on. Indeed, through this distinction between risk and uncertainty—luck—in ideas of power and decision-making, protean power presents useful insights into how leaders could be influenced by experiences with nuclear luck. As such, to further understand the connection between the availability heuristic, the prospect theory, and protean power, it is essential to apply actual cases of nuclear luck, in this case: the Soviet false alarm in Serpukhov-15 and Able Archer-83.

---

[87] Lucia A. Seybert and Peter J. Katzenstein, "Protean Power and Control Power: Conceptual Analysis." In *Protean Power: Exploring the Uncertain and Unexpected in World Politics*, 3–26. Cambridge University Press, 2018: p. 10.

[88] Katzenstein and Seybert, "Uncertainty, Risk, Power," p. 27-28.

[89] Katzenstein and Seybert, "Uncertainty, Risk, Power," p. 33.

[90] Katzenstein and Seybert, "Uncertainty, Risk, Power," p. 32.

A Case Study Analysis of the War Scare: The Case of Serpukhov-15

The Background and What Went Wrong

At 12:15 a.m., the very early morning of 27 September 1983, the Soviet Union received a warning.[91] The warning was received at a control station for the Soviet Union's satellite early-warning system, called Serpukhov-15, by the duty officer at the time, Lieutenant Colonel Stanislav Yevgrafovich Petrov.[92] The warning claimed that a Minuteman ICBM was incoming from America, with another four being reported as incoming after two minutes.[93] For Petrov, the warning system claiming that all the indicators of a nuclear war were approaching, with the system saying to "launch" due to a "high probability," was likely reinforced by the general atmosphere of nuclear unease that the Soviet Union was facing at the time.[94] Yet, Petrov double-checked by examining the optical telescope to see if it saw an attack incoming—and it did not. As such, Petrov, facing two competing signals of a possible nuclear war, reported that it was a false alarm to the General Staff.[95] The decision made by Petrov that night was the correct one, as the system in place at Serpukhov-15 was the Signal-M, which had not been fully tested and came with malfunctions.[96] This was emblematic of the Soviet Union's issue with their alarms, which, according to some interviews, were commonly malfunctioning.[97] Indeed, after a later investigation, the Soviets found out that this warning system was one such system, and actually had detected "rays of sunlight reflecting off high-altitude clouds."[98] In fact, this incident was reproducible, as Petrov later claims that Serpukhov-15's early-warning system's satellite would give false reports depending on its location. If the satellite is "at a certain location relative to the Earth under specific atmospheric conditions," then the reflection of the sun on clouds would present a false report.[99]

---

[91] Antón Barba-Kay, "There Is No Ethical Automation: Stanislav Petrov's Ordeal by Protocol." *Journal of Military Ethics* 23, no. 3–4 (October 2024): p. 278. https://doi.org/10.1080/15027570.2024.2434352.

[92] Lewis, Pelopidas, and Williams, p. 13.

[93] Jones, "*Able Archer*," p. 35-36.

[94] Krepinevich, "Uncertainty, Risk, Power," p. 19-21.

[95] Cimbala, "Nuclear Learning from the Past:," p. 7-8.

[96] Krepinevich, "Uncertainty, Risk, Power," p. 19-21.

[97] Lewis, Pelopidas, and Williams, p. 13.

[98] Jones, "*Able Archer,*" p. 35-36.

[99] Lewis, Pelopidas, and Williams, p. 13.

T*he Role of Nuclear Luck*

The sunlight affecting the early warning system is certainly a part of why luck played a role in this event. The sun's interference, along with the at-times malfunctioning system, was largely unpredictable and uncontrollable. This was in the realm of unknown unknowns, as no one even thought, at the time, that such luck, or "unluck," would or could happen. The Serpukhov-15 incident also acts as a reminder that risk management can only go so far, as what happened was not calculable, but rather came down to luck. Nevertheless, the system itself and the weather conditions were not the only aspects of luck to appear in this case.

Petrov's decision not to confirm a nuclear attack and subsequently send a retaliatory attack was lucky. To go further, a part of the early-warning system process is to quickly detect attacks to primarily make good on the promise of retaliating with similar nuclear attacks. However, this retaliation had a strict time window of opportunity since the launch of a nuclear attack. Generally, the Soviet leadership believed that leaders would have twenty minutes of reaction time, and only four to six minutes for Pershing II missiles.[100] As such, Petrov did not have much time to confirm the threat, and yet, he still chose not only to check with another instrument, but also to believe that the detection over the primary system. Furthermore, a reason why he ended up not confirming the threat as a supposed real one is that he had an instinctual belief that it was not a real attack, in defiance of the constant messaging from Soviet leaders that an attack from America was not only possible, but potentially imminent.[101] Consequently, if the world were not as lucky, that system warning could have taken place when an officer who was more likely to follow strict procedure or who had existing biases that conditioned them to believe the attack was real. Nevertheless, the incident ended with Petrov receiving a reprimand from his superiors for failing to follow proper procedure, and the incident would only become public knowledge in the late 1990s.[102]

[100] Krepinevich, "Uncertinty, Risk, Power," p. 19-21.
[101] Barba-Kay, "There Is No Ethical Automation," p.278.
[102] Barba-Kay, "There Is No Ethical Automation," p. 280.

The Able Archer-83 Case

The Background and What Went Wrong

Conducted from 7 November 1983 to 11 November 1983, Able Archer-83 is an annual command post exercise sponsored by the Supreme Allied Commander Europe for NATO ally training.[103] The exercise was the continuation and culmination of another NATO exercise, Reforger, which lasted from 25 August 1983 to 28 October 1983.[104] Additionally, Reforger itself was also a part of a larger series of NATO exercises called Autumn Forge 83.[105] Nonetheless, with a budget of around 114 to 116 million USD, the Able Archer-83 exercise was still a large and significant exercise despite being a subset of a subset of larger and more expensive NATO exercises.[106] The main objective of Able Archer-83 was to practice the transition from conventional weapons in a conflict with the Soviet Union to chemical weapons and then to nuclear weapons.[107] The exercise started with a war game idea that on 3 November 1983, the Soviets—code-named "Orange"—would enter a conventional war with NATO—code-named "Blue"—through a gradual advance to West Germany and the United Kingdom.[108] Eventually, the Soviets used chemical weapons, and after failing to make successful advances, NATO used limited nuclear strikes on the second day of the Able Archer-83 exercise, 8 November, and this would escalate to an all-out nuclear war on 11 November.[109] However, the exercise turned out to have been a potential disaster.

---

[103] Strategic Air Command, Seventh Air Division. *Exercise Able Archer 83 After Action Report*. 1 December 1983: p. 1.

[104] Commander in Chief, United States Army, Europe (CINCUSAREUR). *Reforger 83: After Action Report,* 6 March 1984: p. 2.

[105] Larry Burriss. "Slouching toward Nuclear War: Coorientation and NATO Exercise Able Archer 83." The International Journal of Intelligence, Security, and Public Affairs 21, no. 3 (2 September 2019): p. 234. https://doi.org/10.1080/23800992.2019.1695709.

[106] U.S. Senate, *Department of Defense Appropriations for 1986: Hearings before a subcommittee of the Committee on Appropriations, House of Representatives, Ninety-ninth Congress, First Session* § (1985): p. 562.

[107] Strategic Air Command, Eighth Air Force. *History of the Headquarters, Seventh Air Division: 1 October 1983-31 March 1984*. Undated: p. 80-81.

[108] Gregory Pedlow. "Exercise Able Archer 83: Information from SHAPE Historical Files." NATO Unclassified. 28 March 2013: pp.1-2.

[109] Pedlow, "Exercise Able Archer-83," p.1-2.

According to an interview with Robert McFarlane, the National Security Advisor to Reagan from 1983 to 1985, while the Able Archer exercise was done annually, in 1983 the exercise was very different and rare.[110] Unlike before, during Able Archer-83, NATO tested new procedures of using nuclear weapons, and went through the different alert phases to a General Alert.[111] Moreover, Able Archer-83 also practiced nuclear warhead handling procedures with "realistic-looking dummy warheads," and there were "slips of the tongue over open imperceptible radio communication," mentioning nuclear strikes.[112] While these changes to the exercise may be fine in a period of peace and friendliness, they are not as fine during a period called the War Scare. Indeed, the Soviets already had major concerns of a first strike from America, as mentioned before; however, they specifically also thought it would happen under the guise of a NATO exercise.[113] Furthermore, the Autumn Forger and Reforger exercises were particularly a source of unease and concern for the Soviets, which is notable as at the time the Soviets did not know or use the name Able Archer.[114] As such, the changes in the annual exercise likely rang some alarm bells, with the exercise hitting at least four potential indicators that would be reported to Operation VRYaN.[115]

The Role of Nuclear Luck

The Soviets conducted over thirty-six intelligence flights during the Able Archer-83 exercise—more than any previous Able Archer.[116] Furthermore, the Warsaw Pact increased its military activity, and the nuclear forces in Poland and East Germany were placed on "high alert status with readiness of nuclear strike forces."[117] However, these changes in the Soviets did not go unnoticed. Furthermore, Lieutenant General Leonard

[110] Princeton University, "Unpublished Interview with former National Security Advisor Robert McFarlane." Mudd Manuscript Library, in the Don Oberdorfer Papers 1983-1990, Series 3, Research Documents Files. Circa 1989-1990: p. 3.
[111] President's Foreign Intelligence Advisory Board, p. 70.
[112] Jones, *Able Archer 83*," p. 39.
[113] KGB Headquarters, p. 1.
[114] Princeton University, "Unpublished Interview with former Soviet Head of General Staff Marshal Sergei Akhromeyev," Mudd Manuscript Library, in the Don Oberdorfer Papers, pp. 1983-1990, Series 1, Soviet Interviews1990: p. 7.
[115] Jones, "Countdown to Declassification: Finding Answers to a 1983 Nuclear War Scare," p. 50.
[116] President's Foreign Intelligence Advisory Board, p.71.
[117] Jones, "*Able Archer,"*, p. 43.

H. Perroots was the assistant chief of staff for the American Air Forces in Europe, and likely helped prevent a nuclear war.

Perroots claims that there were reports of increased military activity in East Germany during the Able Archer-83 exercise, particularly its air forces, although with not much further evidence, he decides not to increase NATO's alert posture.[118] Later, with evidence from the KGB defector, Oleg Gordievsky, it appears that the Soviets were extremely concerned with the exercise—believing it to be a potential nuclear strike and stressed to KGB chiefs to look for signs of a nuclear strike through Operation VRYaN during the early days of the exercise.[119] To prepare for this potential attack, "all units of the Soviet 4th Air Army were involved in the alert, "which included preparations for immediate use of nuclear weapons."[120] While that reaction was concerning, although understandable in that climate of nuclear fear and anxiety, it is lucky that no exchange actually occurred. Perroots could have easily seen the reported reaction from the Soviets and decided to increase the actual alert posture, which would have stirred Soviet worries of a nuclear strike even more so, potentially causing a nuclear exchange. Luckily, even though a nuclear exchange could have happened had another person been involved, or Perroots ignoring his instinct that nothing major was happening, nuclear war was avoided—but was certainly near it.

Findings and Analysis

The American Aftermath

The upcoming sections discuss the aftermath of the studied War Scare moments: Serpukhov-15 and Able Archer-p. 83. The purpose of doing so is to highlight what happened after experiences of nuclear luck, and to then be able to examine the decision-making behind it. To begin, after the two incidents, primarily the Able Archer-p. 83 incident, the consequences and effects were divided between Reagan and those in the military and especially in the intelligence community. Indeed, after the major War Scare incidents occurred, the CIA put out a report on 30 December 1983 that claimed that the Soviet reaction to the Able Archer-83 exercise was based on attempts at Soviet

[118] Leonard H. Perroots. "End of Tour Report Addendum," in Foreign Relations of the United States, 1981–1988, Volume IV, "Soviet Union," January 1983–March 1985. March 1989: p. 1426-1427.
[119] Perroots, "End of Tour,"p.1427-1428.
[120] Perroots, "End of Tour," p. 1427-1428.

propaganda to give an impression of potential war rather than actual fear or concern of a nuclear confrontation or exchange.[121] The supposed Soviet reaction was largely a military build-up and gathered elite sentiments, discussed in the next section on the Soviet aftermath. Nonetheless, the CIA reiterated this position in a following Special National Intelligence Estimate released on 18 May 1984. The report continued to say that any increased military and intelligence Soviet activity is not "inspired by, and Soviet leaders do not perceive, a genuine danger of imminent conflict with the United States."[122] The CIA's position on the Soviet reaction to the War Scare period would later be criticised by a President's Intelligence Advisory Board report released on 15 February 1990, which argued that the CIA did not give the idea that the War Scare was real any chance for assessment and was too dismissive.[123] Interestingly, the CIA's early assessments that disregarded the War Scare connect well with ideas of control power and protean power.

Part of what made the CIA so dismissive is that they were acting with too much certainty. Consequently, the CIA could be described as operating with and through control power, inflexible to aspects of uncertainty and the unknown. In this instance, the CIA should have operated more closely with and through protean power. Due to protean power operating in uncertainty, it would have conditioned CIA analysts to think not just of America's uncertainty, but also of the Soviet Union's. Additionally, as mentioned before, protean power encourages more innovation, which could have aided the CIA in thinking outside established norms. Furthermore, while the CIA understated the Soviet reaction due to acting in control power, Reagan's actions after the War Scare showcase a degree of protean power and infrapolitics in action.

In a memorandum for McFarlane, the memo explains that an American academic close to Soviet elites found them to be incredibly fearful of an outbreak of war.[124] For Reagan, however, the idea that the Soviets were afraid of America attacking was not new. Indeed, a few days after the Able Archer-83 incident, McFarlane shared reports of the Soviet Union's nuclear activity, and was shocked and afraid of how the Soviets had a

[121] Central Intelligence Agency, Directorate of Intelligence. "Soviet Thinking on the Possibility of Armed Confrontation with US." 30 December 1983: p. 9-10.
[122] Central Intelligence Agency, Director. *Implications of Recent Soviet Military Political Activities.* SNIE 11-10-84. 10 December 1984: p. III.
[123] President's Foreign Intelligence Advisory Board, p. VII.
[124] Matlock, "Subject: American Academic on Soviet Policy," p. 2.

genuine fear that the U.S. could and would attack them.[125] Due to Reagan, at this time, seemingly in a state of protean power, Reagan was willing to accept the uncertainty and aspect of luck that the War Scare signified. To exemplify this acceptance, a few days after the Able Archer-83 incident, and after McFarlane reported to him, Reagan wrote in his diary about how the Soviets are indeed afraid of being attacked and that he wants to try and ensure that is not the case moving forward—which he helped do by setting up a "pipe-line outside the bureaucracy for direct contact with Soviets."[126] Thus, Reagan began to engage in infrapolitics and, consequently, protean power as well by being more flexible in his policy towards the Soviets, which previously was much more aggressive. Moreover, as Reagan opened up to the possibility of more productive arms control talks and decreased his aggressive and staunch stance against the Soviet Union, it also exemplifies other decision-making political psychology concepts.

Clearly, Reagan, seeing how close the world came to a nuclear exchange, and experiencing nuclear luck, put him in a domain of gains, as he "won" by there being no direct confrontation. This domain of gains, along with the fear that came from knowing just how close the world was to nuclear annihilation, made Reagan more risk-averse. To exemplify this new risk-aversion, instead of consistently discussing how "evil" the Soviet Union was, Reagan began to look for productive discussions with the Soviet Union and relaxed his positions on the SDI.[127] Moreover, the availability heuristic likely also applies, as the dramatic experience with nuclear luck Reagan faced probably entered into his operational code or cognitive map and became a shortcut to remember how close the world is and could be to nuclear war. As such, in the case of American decision-making, Reagan does prove parts of the paper's hypothesis right, as Reagan does show more risk-aversion and openness to collaborate through noted political psychology concepts, like the availability heuristic and the prospect theory. However, now to answer whether the same can be concluded on the Soviet side.

[125] Jones, "*Able Archer,*", p. 50.

[126] Ronald Reagan. Diary Entry, 16 November 1983, Ronald Reagan Library: p. 288; Ronald Reagan. Diary Entry, 18 November 1983, Ronald Reagan Library: p. 290.

[127] Cohen, "*When Proliferation Causes Peace,*" p. 50.

The Soviet Aftermath

As the above section mentioned, the Soviets were deeply frightened by the events of the War Scare period. To showcase one example of this fear, the successor to the Dead Hand machine, called Perimeter, began testing in November 1984.[128] Perimeter was a modified version of the Dead Hand, which, instead of launching automatically, now proposed to enable the decision to launch nuclear weapons to be made in an underground command centre by select officers.[129] Such a deterrence system, which was never even told to the Americans, sends evident signs that the Soviet Union was incredibly anxious about an American attack. However, as testing was in late 1984, this example is only one example of many that showcase Soviet fears in the immediate aftermath of the two incidents.

In June 1984, one report claimed that the Soviets were "keeping a portion of their nuclear forces in Eastern Europe on quick alert status."[130] In addition, the report noted that the behaviour of the Soviet Union's military was *disturbing* due to seemingly concentrated efforts on minimising strategic vulnerability at the cost of taking on potential "risks."[131] However, in some efforts to reduce risk, the Soviets did agree to the hotline proposed by Reagan, and according to some sources, Andropov introduced the concept of the "nuclear briefcase"—effectively placing more power over the nuclear weaponry in a single leader—due to the War Scare period.[132] In the case of the Soviets, there do seem to be signs of the political psychological concepts in decision-making that this paper discusses. Namely, Andropov's reaction to the War Scare through accepting the hotline and implementing the *nuclear briefcase* likely showcases the availability heuristic through its imaginability. In the case of Andropov, his experiences with the War Scare period, including its luck aspect, likely allowed the creation of shortcuts that consider outcomes from the position of what is possible and not necessarily plausible. This can be seen through Andropov's continued military build-up and fear of America, even though there was no concrete evidence suggesting a true imminent attack. Although undoubtedly, this is in part due to America's aforementioned psychological warfare

[128] Krepinevich, "Uncertainty, Risk, Power," p. 21-22.
[129] Krepinevich, "Uncertainty, Risk, Power," p. 21-22.
[130] Robert McFarlane. "US/Soviet Tensions," A Memorandum for the Deputy Director of Central Intelligence. 26 June 1984: p. 6.
[131] McFarlane, "US/Soviet Tensions," p. 7.
[132] Jones, "*Able Archer,*", p. 56.

against the Soviets. Moreover, it is likely that the Soviet Union was operating in the domain of losses. Even though the Soviets encountered the near-use and should have been more positive due to the gain of no actual confrontation, the entrenched perceptions of America in the Soviet leadership created a schema of being in the domain of losses. As such, the Soviet Union's riskier behaviour as opposed to America's could be explained by the Soviet leadership's schemas and the perception that the Soviet Union was losing. Thus, in the case of the Soviets, the effect of experiences with nuclear luck on their decision-makers is seemingly more complex. While in line with the political psychology concepts in this paper, the Soviet case shows that experiences with nuclear luck can differ to a degree in the decision-making process, although it still shows openness to collaboration and risk-averse behaviour. This could be due to the structure of the decision-making unit in the Soviet Union as opposed to America; however, that could be an entirely different paper.

Limitations and Scope

While confident in the findings of this paper, there are certain limits and topics beyond the scope of the thesis that could improve parts of the argument. Firstly, this paper recognises that there is a limit to the conclusions that can be drawn from studying the political psychology of decision-makers and their process. Mostly, scholars do not know what exactly is influencing every decision that one makes. While educated estimates and arguments, such as this one, can create good discussion, it is often more of a jumping off point for other discussions, such as furthering the understanding of nuclear luck. Another limitation is that the paper does not utilise decision unit theories and ideas. While the paper incorporates theories on the decision-making process and those involved through political psychological concepts, it does not look at how differences in the decision unit may affect the decision-making process. Undoubtedly, the decision unit affects processes and outcomes, and it could potentially explain the differences in Soviet and American experiences with nuclear luck and how it affected future outcomes, especially considering how differently the Soviets were structured and how frequent the leadership change was during the War Scare in Moscow.[133] However, for this paper, examining decision units is out of the scope of this paper, as its primary focus is on the decision-makers and experiences of nuclear luck. On the topic of the Soviets, this paper

[133] Margaret G. Hermann. "How Decision Units Shape Foreign Policy: A Theoretical Framework." International Studies Review 3, no. 2 (September 2001): pp. 47–81. https://doi.org/10.1111/1521-9488.00234.

was also limited in its ability to research the Soviet side of the War Scare due to how inaccessible Soviet and Russian archives are, complicating finding materials with insight into the Soviet leadership and their decision-making process. Furthermore, a more extensive and longer future paper that aims to look more broadly at the connection of the decision-making process and nuclear luck would do well to include an understanding of decision units. Nevertheless, this paper still found interesting connections with decision-making and nuclear luck, and this includes potential implications.

Implications

Anti-Proliferation and Behavioural Arms Control

The findings of this paper conclude that experiences of nuclear luck do have an influence in shaping the decisions made by leaders on nuclear security through inviting more risk-averse behaviour that is considerate of the destructive power wielded by nuclear arsenals. Such findings have interesting implications for anti-proliferation movements and attempts to abolish nuclear weapons entirely from the world. Today, nuclear arsenals are increasing, but the presence of nuclear luck remains.[134] While standard operating procedures and technology have evolved, luck, or unluck in some cases, will always find that gap in risk management.[135] The existence of nuclear luck and its effect on decision-makers suggests that the ideas and political psychology of decision-makers have significant impacts on nuclear security and the movement to reduce nuclear weapons in the world. One such idea this connects to is behavioural arms reduction (BAC), which argues that the way decision-makers think about nuclear weapons is just as important as formal policies and treaties.[136] This new theory was introduced by Ulrich Kühn and Heather Williams, and suggests that by creating more informal initiatives that focus on reducing possible actions that can break out a war. Instead of looking at just the number of weapons in a nuclear arsenal, BAC would look to change and prioritise addressing "military behaviours and activities."[137] In focusing on behaviours, BAC

[134] Benoît Pelopidas, Hebatalla Taha, and Tom Vaughan. "How Dawn Turned Into Dusk: Scoping and Closing Possible Nuclear Futures After the Cold War." *Journal of Strategic Studies*, 3 January 2024, p. 1–2. https://doi.org/10.1080/01402390.2023.2290441.

[135] Shaun Gregory and Alistair Edwards. "The Hidden Cost of Deterrence: Nuclear Weapons Accidents 1950-88." Bulletin of Peace Proposals 20, no. 1 (January 1989): p.8. https://doi.org/10.1177/096701068902000101.

[136] Ulrich Kühn and Heather Williams. "Behavioral Arms Control and East Asia." *Journal for Peace and Nuclear Disarmament* 7, no. 1 (January 2, 2024): p. 144. https://doi.org/10.1080/25751654.2024.2337965.

[137] Kühn and Williams, "Behavioral Arms Control and East Asia," p. 144-146.

understands that while standard diplomatic and technical measures might affect the risk calculus of nuclear war—purposeful or not—it is more meaningful to move closer to a framework that encourages an intrinsic devaluation of nuclear weapons and schemas, biases, or heuristics that are more risk-averse and collaborative.[138] Moreover, this argument also connects to concepts around protean power. By being more identity-focused and reinterpreting traditional understandings of nuclear risk management, BAC displays an aspect of protean power through such political and uncertain dynamics.[139] As such, this paper's findings that behaviour is affected by nuclear luck and that nuclear luck exists strongly support BAC as a possible step toward creating future anti-proliferation methods and frameworks.

Furthering Nuclear Luck Scholarship

Currently, as mentioned at the start of this paper, nuclear luck remains an understudied concept when analysing nuclear incidents and nuclear policies. However, by addressing nuclear luck and studying its effects in this thesis, the paper contributes to an academic gap in nuclear security scholarship. The paper has also made new connections to various political psychological ideas on decision-making through the incorporation of a nuclear luck conceptual framework. This can largely be seen through how the paper highlights concepts like the availability heuristic, the prospect theory, and protean power through a simultaneous nuclear luck and decision-making lens—further breaking down traditional risk-management ideas of nuclear security and deterrence calculus. Additionally, another contribution this paper makes is by explicitly connecting the War Scare and some incidents during it, to nuclear luck. Previously, scholarship on the Serpukhov-15 incident or the Able Archer-83 incident made little to no reference to nuclear luck as a factor. However, this paper manages to observe the consequences of nuclear luck through the decision-making process and makes findings on it.

Conclusion

In Alexander L. George's study of the operational code, he analyses what the Bolsheviks thought of the role of "chance" in politics and "human affairs."[140] According

[138] Pelopidas and Egeland, "The False Promise of Nuclear Risk Reduction," p. 347.
[139] Seybert and Katzenstein, "Protean Power and Control Power: Conceptual Analysis,"p. 25.
[140] George, "The 'Operational Code'," p. 204.

to George, the Bolsheviks believed that Marxism-Leninism held all political answers, making *accidental* events not possible. In this study, the Bolsheviks represent just how far back the traditional ideas of risk management go. However, George's work, through its criticism of the Bolsheviks and his understanding of the operational code, also showcases ideas of uncertainty and luck. Evidently, luck is not new in political science—just heavily underrepresented. This thesis asked whether nuclear luck had an effect on decision-makers and their process with future judgments and directions on nuclear security. Preliminary ideas on the topic created the hypothesis that nuclear luck, when experienced, would lead to risk-averse behaviour that encourages collaboration. Through an examination of nuclear luck, an understanding of select political psychological theories, and the two case studies of the Serpukhov-15 incident and the Able Archer-83 incident, this paper found that nuclear luck activates heuristics, biases, and schemas formed from the evocative experience and shifts decision-makers' sense of risk to be more understanding of the uncertainty in the world. However, this newly formed understanding of uncertainty and luck can be reflected in different ways—with the Americans showcasing more collaborative and risk-averse behaviour, while the Soviets showcasing a more mixed sense of risk. Nevertheless, through these findings, the paper also has several implications for the future of anti-proliferation movements, like BAC. However, more than that, this paper also helps by spreading the idea that the world survived due to luck, and that the future of this planet should not have to rely on nuclear luck or the political psychology of decision-makers and their processes.

Bibliography

Andropov, Yuri. "Statement By The General Secretary of the Central Committee of the Communist Party of the Soviet Union," from "The Cold War and Human Security: Translations for the Parallel History Project on NATO and the Warsaw Pact," Douglas Selvage, Principal Investigator. 4 January 1983; translated in December 2009.

----------. "The Results of the 26th Congress of the CPSU and Tasks for the Party Organization of the KGB." Ukrainian KGB Archive, 25 March 1981.

Atkeson, Edward B. "Soviet Use of Historical Data for Operational Analyses," in *Memorandum for General Richard G. Stillwell*. 23 November 1983.

Barba-Kay, Antón. "There Is No Ethical Automation: Stanislav Petrov's Ordeal by Protocol." Journal of Military Ethics 23, no. 3–4 (October 2024): pp. 277–88. https://doi.org/10.1080/15027570.2024.2434352.

Bas, Muhammet A., and Andrew J. Coe. "A Dynamic Theory of Nuclear Proliferation and Preventive War." International Organization 70, no. 4 (2016): pp. 655–85. https://doi.org/10.1017/s0020818316000230.

Booth, Ken. *Theory of World Security*. Cambridge University Press, 2008.

Burriss, Larry. "Slouching toward Nuclear War: Coorientation and NATO Exercise Able Archer 83." The International Journal of Intelligence, Security, and Public Affairs 21, no. 3 (2 September 2019): pp. 219–50. https://doi.org/10.1080/23800992.2019.1695709.

Central Intelligence Agency, Chief, Office of Soviet Analysis, and Director, National Warning Staff, [names redacted], Comments on Memorandum of Lieutenant Perroots, Distributed by Fritz Ermarth to DCI and DDCI, Undated, circa 1989.

Central Intelligence Agency, Director. *Implications of Recent Soviet Military Political Activities. SNIE 11-10-84*. 10 December 1984.

Central Intelligence Agency, Directorate of Intelligence. "Soviet Thinking on the Possibility of Armed Confrontation with US." 30 December 1983.

Central Intelligence Agency, National Intelligence Daily, "USSR-East Germany: Air Units Alerted," 10 November 1983.

Chebrikov, Viktor. "On the Results of the November 1982 Plenary Meeting of the CPSU Central Committee." Ukrainian KGB Archive, 12 January 1983.

Cimbala, Stephen J. "Nuclear Learning from the Past: 'Able Archer' and the 1983 War Scare." The United States, Russia and Nuclear Peace, 2020, pp. 1–23. https://doi.org/10.1007/978-3-030-38088-5_1.

----------. "Revisiting the Nuclear 'War Scare' of 1983: Lessons Retro- and Prospectively." The Journal of Slavic Military Studies 27, no. 2 (April 3, 2014): pp. 234–53. https://doi.org/10.1080/13518046.2013.844506.

Cirincione, Joseph. *Nuclear Nightmares.* Columbia University Press, 2013.

Cohen, Michael D. *When Proliferation Causes Peace: The Psychology of Nuclear Crises*. Washington, DC: Georgetown University Press, 2017.

Commander in Chief, United States Army, Europe (CINCUSAREUR). *Reforger 83: After Action Report*, 6 March 1984.

Comptroller General, *NORAD's Missile Warning System: What Went Wrong?: Report to the Chairman, Committee on Government Operations, House of Representatives* § (1981).

Cottam, Martha L., Elena Mastors, Beth Dietz, and Thomas Preston. *Introduction to Political Psychology*. Vancouver, B.C: Langara College, 2007.

Department of Defense, *Autumn Forge 83: Final After Action Report* § (1984).

Department of Defense. "False Alerts," Memorandum to President Carter, 17 July 1980.

Department of Defense and Central Intelligence Agency. "US and Soviet Strategic Forces," Joint Net Assessment, 14 November 1983.

Erikson, Jennifer L. "Changing History?: Innovation and Continuity in Contemporary Arms Control." Essay. In *Protean Power: Exploring the Uncertain and Unexpected in World Politics*, pp. 229–45. Cambridge University Press, 2018.

Faulkner, Phil, Alberto Feduzi, and Jochen Runde. "Unknowns, Black Swans and the Risk/Uncertainty Distinction." Cambridge Journal of Economics 41, no. 5 (August 2017):pp. 1279–1302. https://doi.org/10.1093/cje/bex035.

Fischer, Benjamin B., *An Intelligence Monograph: A Cold War Conundrum: The 1983 Soviet War Scare* § (1997).

----------. "Threat Perception, Scare Tactic, or False Alarm?: The 1983 War Scare in US-Soviet Relations." CIA Center for the Study of Intelligence, 1996, pp. 179–94. https://doi.org/10.2307/jj.26193260.12.

Freedman, Lawrence, and Jeffrey H. Michaels. The Evolution of Nuclear Srategy. London, UK: Palgrave Macmillan, 2019.

Fuhrmann, Matthew. Atomic Assistance: How "Atoms For Peace" Programs Cause Nuclear Insecurity. Ithaca: Cornell University Press, 2016.

George, Alexander L. "The 'Operational Code': A Neglected Approach to the Study of Political Leaders and Decision-Making." International Studies Quarterly 13, no. 2 (June 1969): 190. https://doi.org/10.2307/3013944.

Gregory, Shaun, and Alistair Edwards. "The Hidden Cost of Deterrence: Nuclear Weapons Accidents pp. 1950-88." Bulletin of Peace Proposals 20, no. 1 (January 1989): 3–10. https://doi.org/10.1177/096701068902000101.

Guttel, Ehud. "Overcorrection," Georgetown Law Journal 93, no. 1 (November 2004): pp. 241-284

Hafner-Burton, Emilie Marie, Alex Hughes, and David G. Victor. "The Cognitive Revolution and the Political Psychology of Elite Decision Making." Perspectives on Politics 11, no. 2 (June 2013). https://doi.org/https://www.jstor.org/stable/43280794 .

Harriman, Averell. "Memorandum of Conversation between General Secretary Yuri Andropov and Averell Harriman." Averell Harriman Papers, Library of Congress, Manuscript Division, Box 655. 2 June 1983.

Hermann, Margaret G. "How Decision Units Shape Foreign Policy: A Theoretical Framework." International Studies Review 3, no. 2 (September 2001): pp. 47–81. https://doi.org/10.1111/1521-9488.00234.

Heuser, Beatrice. "Fortuna, Chance, Risk and Opportunity in Strategy from Antiquity to the Nuclear Age." Journal of Strategic Studies 46, no. 6–7 (October 17, 2022): pp. 1406–33. https://doi.org/10.1080/01402390.2022.2111306.

Hines, John G. Interview with Colonel General Varfolomei Vladimirovich Korobushin with participation by Senior Defense Department Advisor Vitalii Kataev. Other. Soviet Intentions pp. 1965-1985: Volume II Soviet Post-Cold War Testimonial Evidence, 10 December 1992.

----------. "Interview with Lieutenant General Gelii Viktorovich Batenin." In *Soviet Intentions 1965-1985: Volume II Soviet Post-Cold War Testimonial Evidence*, 6 August 1993.

----------.Interview with Viktor M. Surikov, Deputy Director of the Central Scientific Research Institute. Other. Soviet Intentions pp. 1965-1985: Volume II Soviet Post-Cold War Testimonial Evidence, September 11, 1993.

Intelligence Community Staff, Director. "FSCS Study: Recommendation for the National Inetlligence Meritorious Unit Citation," 11 July 1985.

Jervis, Robert. "Perception and the Level of Analysis Problem." In Perception and Misperception in International Politics, REV-Revised., pp. 13–31. Princeton: Princeton University Press, 2017. https://doi.org/10.1515/9781400885114-004.

Johnson, Thomas R., *Book IV: Cryptologic Rebirth, 1981-1989 American cryptology during the Cold War, 1945-1989* § (1995).

Jones, Nate. *Able Archer 83: The Secret History of the NATO Exercise that Almost Triggered Nuclear War.* New York: The New Press, 2016.

----------. "Countdown to Declassification: Finding Answers to a 1983 Nuclear War Scare." Bulletin of the Atomic Scientists 69, no. 6 (November 2013): pp. 47–57. https://doi.org/10.1177/0096340213508630.

Katzenstein, Peter J. and Lucia A. Seybert. "Uncertainty, Risk, Power and the Limits of International Relations Theory." In *Protean Power: Exploring the Uncertain and Unexpected in World Politics*, pp. 27–56. Cambridge University Press, 2018. https://doi.org/10.1017/9781108597456.003.

Keller, Jonathan W. "Constraint Respecters, Constraint Challengers, and Crisis Decision Making in Democracies: A Case Study Analysis of Kennedy Versus Reagan." Political Psychology 26, no. 6 (11 November 2005): pp. 835–67. https://doi.org/10.1111/j.1467-9221.2005.00447.x.

KGB Headquarters, Moscow. "Permanent operational assignment to uncover NATO preparations for a nuclear missile attack on the USSR," in Comrade Kryuchkov's Instructions: Top Secret Files on KGB Foreign Operations, 1975-1985. 17 February 1983.

Krepinevich, Andrew F. "Critical Mass: Nuclear Proliferation in the Middle East." Center for Strategic and Budgetary Assessments, 2013. https://doi.org/https://csbaonline.org/research/publications/critical-mass-nuclear-proliferation-in-the-middle-east.

Kühn, Ulrich, and Heather Williams. "Behavioral Arms Control and East Asia." Journal for Peace and Nuclear Disarmament 7, no. 1 (2 January 2024): pp. 143–56. https://doi.org/10.1080/25751654.2024.2337965.

Lebow, Richard Ned, and Benoît Pelopidas. "Facing Nuclear War: Luck, Learning, and the Cuban Missile Crisis." The Oxford Handbook of History and International Relations, 16 August 2023, p. 705–20. https://doi.org/10.1093/oxfordhb/9780198873457.013.47.

Leitenberg, Milton. "The Hazards of Operations Involving Nuclear Weapons during the Cold War." Journal of Cold War Studies 20, no. 3 (September 2018): pp. 207–49. https://doi.org/10.1162/jcws_a_00826.

Lerner, Jennifer S., and Dacher Keltner. "Fear, Anger, and Risk." Journal of Personality and Social Psychology 81, no. 1 (2001): pp. 146–59. https://doi.org/10.1037//0022-3514.81.1.146.

Lewis, Patricia, Benoît Pelopidas, and Heather Williams. "Too Close for Comfort: Cases of Near Nuclear Use and Options for Policy." Chatham House, 28 April 2014: Pg 1, 7. https://www.chathamhouse.org/2014/04/too-close-comfort-cases-near-nuclear-use-and-options-policy.

Matlock, Jack. "Subject: American Academic on Soviet Policy," in Memorandum for National Security Advisor Robert. McFarlane Reagan Presidential Library, Matlock Files, Chron December 1983 [1 of 2], Box 2, 90888. 13 December 1983.

McDermott, Rose. "Prospect Theory in International Relations: The Iranian Hostage Rescue Mission." Political Psychology 13, no. 2 (June 1992): pp. 237. https://doi.org/10.2307/3791680.

McFarlane, Robert. "US/Soviet Tensions," A Memorandum for the Deputy Director of Central Intelligence. 26 June 1984.

McMahon, John. "For National Security Advisor Robert McFarlane from acting Central

Intelligence Agency Director John McMahon, "Subject: Andropov's Leadership Style and Strategy." February 1984.

Miles, Simon. "The War Scare That Wasn't: Able Archer 83 and the Myths of the Second Cold War." Journal of Cold War Studies 22, no. 3 (August 2020): pp. 86–118. https://doi.org/10.1162/jcws_a_00952.

Mitzen, Jennifer, and Randall L. Schweller. "Knowing the Unknown Unknowns: Misplaced Certainty and the Onset of War." Security Studies 20, no. 1 (March 21, 2011): pp. 2–35. https://doi.org/10.1080/09636412.2011.549023.

Montgomery, Hugh. "SNIE 11-10-1984," 28 May 1984.

"MVR Information re: Results From the Work on the Improvement of the System for Detection of RYAN Indications," Archive of the Ministry of the Interior and Diplomatic Archive of Bulgaria. 9 March 1984.

National Intelligence Officer. "Subject: Warsaw Pact Early Warning Indicator Project." 1 February 1985.

Pauly, Reid B., and Rose McDermott. "The Psychology of Nuclear Brinkmanship." International Security 47, no. 3 (1 January 2023): pp. 9–51. https://doi.org/10.1162/isec_a_00451.

Pedlow, Gregory. "Exercise Able Archer 83: Information from SHAPE Historical Files." NATO Unclassified. 28 March 2013.

Pelopidas, Benoît, R. Gerald Hughes, and Len Scott. "We All Lost the 'Cuban Missile Crisis': Revisiting Richard Ned Lebow and Janice Gross Stein's Landmark Analysis in We All Lost the Cold War." In The Cuban Missile Crisis, 1st ed., pp. 165–82. United Kingdom: Routledge, 2015. https://doi.org/10.4324/9781315732589-7.

Pelopidas, Benoît, and Kjølv Egeland. "The False Promise of Nuclear Risk Reduction." International Affairs 100, no. 1 (8 January 2024): pp. 345–60. https://doi.org/10.1093/ia/iiad290.

Pelopidas, Benoît, Hebatalla Taha, and Tom Vaughan. "How Dawn Turned Into Dusk: Scoping and Closing Possible Nuclear Futures After the Cold War." Journal of Strategic Studies, 3 January 2024, pp. 1–23. https://doi.org/10.1080/01402390.2023.2290441.

Pelopidas, Benoît. "A Bet Portrayed as a Certainty: Reassessing the Added Deterrent Value of Nuclear Weapons ." Chp in *The War That Must Never Be Fought: Dilemmas of Nuclear Deterrence*, pp. 5–56. Hoover Institution, 2015.

----------. "Power, Luck, and Scholarly Responsibility at the End of the World(s)." International Theory 12, no. 3 (7 August 2020): pp. 459–70. https://doi.org/10.1017/s1752971920000299.

----------. "The Unbearable Lightness of Luck: Three Sources of Overconfidence in the Manageability of Nuclear Crises." European Journal of International Security, 2017, 2 (2). ⟨10.1017/eis.2017.6⟩.

Perez, Frank H. "Department of State memo from Frank H. Perez, Office of Strategic and General Research at the Bureau of Intelligence and Research, to Leonard Weiss, Deputy Director for Functional Research at the Bureau of Intelligence and Research." 1971.

Perroots, Leonard H. “End of Tour Report Addendum," in Foreign Relations of the United States, 1981–1988, Volume IV, "Soviet Union," January 1983–March 1985. (March 1989): pp. 1426-1429.

Perrow, Charles. *Normal Accidents*. Princeton University Press, 2011.

Phillips, Alan F. “Too Grave a Risk.” Peace Review 10, no. 3 (September 1998): pp. 469–73. https://doi.org/10.1080/10402659808426186.

President’s Foreign Intelligence Advisory Board, *The Soviet “War Scare”* § (1990).

Princeton University, “Unpublished Interview with former National Security Advisor Robert McFarlane.” Mudd Manuscript Library, in the Don Oberdorfer Papers 1983-1990, Series 3, Research Documents Files. Circa 1989-1990.

Princeton University, “Unpublished Interview with former Soviet Head of General Staff Marshal Sergei Akhromeyev.” Mudd Manuscript Library, in the Don Oberdorfer Papers 1983-1990, Series 1, Soviet Interviews, 1990.

Reagan, Ronald. *An American Life*. New York: Simon & Schuster, 2011.

----------. Diary Entry, 10 October 1983, Ronald Reagan Library.

----------. Diary Entry, 14 June 1984, Ronald Reagan Library.

----------. Diary Entry, 16 November 1983, Ronald Reagan Library.

----------. Diary Entry, 18 November 1983, Ronald Reagan Library.

Reason, James. “Human Error: Models and Management.” BMJ 320, no. 7237 (March 18, 2000): 768–70. https://doi.org/10.1136/bmj.320.7237.768.

Rendall, Matthew. “Nuclear Weapons and Intergenerational Exploitation.” Security Studies 16, no. 4 (6 December 2007): pp. 525–54. https://doi.org/10.1080/09636410701741070.

Sagan, Scott Douglas. *The Limits of Safety: Organizations, Accidents, and Nuclear Weapons*. Princeton, NJ: Princeton University Press, 2020.

Sayle, Timothy Andrews. “Andropov’s Hungarian Complex.” Cold War History 9, no. 3 (1 October 2009): pp. 427–39. https://doi.org/10.1080/14682740902764528.

Schelling, Thomas C. *The Strategy of Conflict.* Pickle Partners Publishing, 1960.

Sechser, Todd S., and Matthew Fuhrmann. "Crisis Bargaining and Nuclear Blackmail." International Organization 67, no. 1 (January 2013): pp. 173–95. https://doi.org/10.1017/s0020818312000392.

Selvage, Douglas. "Comrade Kryuchkov's 'War Scare' (1983), or the Bureaucratic Origins of the 'Able Archer' War-Scare Thesis." International Journal of Intelligence and Counter-Intelligence 38, no. 1 (8 May 2024): pp. 31–47. https://doi.org/10.1080/08850607.2024.2334198.

Seybert, Lucia A., and Peter J. Katzenstein. "Protean Power and Control Power: Conceptual Analysis ." Chp In *Protean Power: Exploring the Uncertain and Unexpected in World Politics*, pp. 3–26. Cambridge University Press, 2018.

"Stasi Note on Meeting Between Minister Mielke and KGB Chairman Andropov," 11 July 1981, History and Public Policy Program Digital Archive, Office of the Federal Commissioner for the Stasi Records (BStU), MfS, ZAIG 5382, pp. 1-19. Translated from German for CWIHP by Bernd Schaefer. http://digitalarchive.wilsoncenter.org/document/115717

Strategic Air Command, Eighth Air Force. History of the Headquarters, Seventh Air Division: 1 October pp. 1983-31 March 1984. Undated.

Strategic Air Command, Seventh Air Division. Exercise Able Archer 83 After Action Report. 1 December 1983.

Tannenwald, Nina. "The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use." International Organization 53, no. 3 (1999): pp, 433–68. https://doi.org/10.1162/002081899550959.

U.S. Senate, Dangerous stalemate: Superpower relations in Autumn 1983: A report of a delegation of eight senators to the Soviet Union, to the United States Senate (1983).

U.S. Senate, Department of Defense Appropriations for 1986: Hearings before a subcommittee of the Committee on Appropriations, House of Representatives, Ninety-ninth Congress, First Session § (1985).

van Dijk, Ruud, Artemy M Kalinovsky, and Craig Daigle. "Nuclear Weapons and the Cold War." In The Routledge Handbook of the Cold War, 1st ed., pp. 275–91. Routledge, 2014. https://doi.org/10.4324/9781315882284-27.