

Sixty Years After the Cuban Missile Crisis

Time to Stop Playing Russian Roulette
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Executive Summary

When I first contemplated writing this report about a year ago, I expected to say that never again must we make mistakes that take us dangerously close to the nuclear abyss, as happened during the Cuban missile crisis. Unfortunately, Russia's invasion of Ukraine once again has brought us to a very dangerous place.

This report shows that, prior to the war in Ukraine we were playing a global version of Russian roulette with a nuclear-armed gun once every fifteen years, whereas now the trigger is being pulled once every year that the war drags on.

A number of dangerous mistakes that resulted in those risk levels are documented.

As an historical example, during the Cuban missile crisis, three Soviet submarines were attacked by American destroyers. Only forty years later did we learn that those subs each carried a nuclear torpedo and, in one case, crew members maintained that the captain ordered it to be armed.

The most dangerous recent mistake was Putin's invasion of Ukraine, which has greatly increased the risk of nuclear war. But, since we in the West do not have power to directly correct his error, it pays to look for mistakes that we are making. One is our overly simplified narrative which sees the war in Ukraine as solely Russia's fault. In contrast, while 85% of Ukrainians in a University of Chicago poll see Russia as responsible for the war, 70% say the same about their own government and 58% say that about the US. We need to support Ukraine in its resistance to Russia's unjustified invasion, but we also need to recognize that the situation is more complex than its current portrayal.

While nuclear disarmament is often posed as the required response to the nuclear threat, it is shown that the solution involves a long-range process of change in which fundamental assumptions about national security are corrected to reflect the realities of the nuclear age. Only after such earlier moves are made can nuclear disarmament and other possible solutions receive serious consideration.

A number of hopeful signs are then highlighted, including the fact that we are almost half way from the peak of the arms race to an intermediate goal that requires a fundamental shift in our thinking about national security.

Society's increased concern with other technological threats such as climate change, cyber warfare, and AI is also hopeful — but only if we recognize that all of those risks, along with the nuclear threat, emanate from the same fundamental source: the chasm between the godlike physical power technology has given humanity and our, at best, irresponsible adolescent behavior. We need to grow up really fast or we will kill ourselves.

If we can find the courage to stop clinging to security blankets that no longer work, we will build a world that we can be proud to pass on to future generations. We will have transformed the nuclear threat into the nuclear opportunity.

1. How risky was the Cuban missile crisis?

American participants in the crisis have given widely varying estimates of the risk that it would escalate to war with the Soviets. ExComm¹ member C. Douglas Dillon stated, “we didn’t think there was any real risk of a nuclear exchange,”² and Kennedy’s National Security Advisor McGeorge Bundy estimated that risk at “one in 100.”³

On the other hand, Kennedy speech writer Theodore Sorensen quotes the president as saying the odds of war were “somewhere between one out of three and even,”⁴ and Secretary of Defense McNamara “feared I might never live to see another Saturday night.”⁵

Estimates made at the time of the crisis need to be reevaluated in light of information that none of the American participants knew at the time, particularly the first two items listed below. The above estimates also need to be viewed with caution because sometimes participants may have been motivated to downplay the risk, while at others they may have had reasons to exaggerate it.

Readers should therefore form their own opinions based on the following facts, each of which is briefly explained in Appendix I, and then draw their own conclusions on the critical question framed at the end of the list: How great was the risk of the Cuban missile crisis escalating to full-scale nuclear war?

1. American destroyers attacked three Soviet submarines that, unbeknownst to any Americans, were armed with nuclear torpedoes, and at least one sub is alleged to have come close to using that weapon.
2. American decision makers who advocated invading Cuba did not know that the Soviets had battlefield nuclear weapons on Cuba that could be used to repel such an attack.
3. At the height of the crisis, an American U-2 strayed into Soviet airspace, creating a risk that nuclear air-to-air missiles would be used.
4. Shortly thereafter, an American U-2 was shot down over Cuba, killing the pilot.
5. The United States had given numerous indications that it intended to invade Cuba, causing Castro to tell Khrushchev to launch his missiles preemptively.
6. Seven months before the crisis, the Joint Chiefs of Staff (JCS) suggested blowing up an American ship in Guantanamo Bay and blaming Cuba in order to create support for an invasion.

¹ Early in the crisis, President Kennedy formed a high level Executive Committee to advise him. It is frequently abbreviated as “ExComm.”

² James G. Blight and David A. Welch, *On the Brink: Americans and Soviets Reexamine the Cuban Missile Crisis*, Hill and Wang, New York, 1989, p. 72

³ Thomas Blanton, “Annals of Blinksmanship,” *The Wilson Quarterly*, Summer 1997, [accessible online](#).

⁴ Theodore C. Sorensen, *Kennedy*, Harper & Row, New York, 1965, p. 705.

⁵ Robert S. McNamara, *Blundering Into Disaster*, Pantheon Books, New York, 1986, p. 11.

7. President Kennedy took actions that extended the crisis in a more moderate form for months after the public thought it had ended.

8. In the month before the crisis erupted, Kennedy and Khrushchev each drew lines in the sand that later boxed them in.

9. During the crisis, Kennedy forgot that the United States had earlier deployed nuclear missiles in Turkey that were comparable to the Soviets' Cuban missiles.

10. President Eisenhower's 1959 prediction of a disastrous Soviet response to a potential American deployment of nuclear missiles in Turkey were ignored in 1962.

11. Critical decisions were often based on domestic political considerations, such as the upcoming midterm elections, rather than national security.

Considering the above list and the explanations in Appendix I leads to a crucial question: How great was the risk of the Cuban missile crisis escalating to full-scale nuclear war?

Of course, such an estimate cannot be made with precision. But, having studied the Cuban missile crisis in great detail, I have concluded that humanity would not have much chance of surviving 10 crises of comparable severity. Put in more mathematical terms, I estimate that the risk of a crisis like 1962's escalating to a full-scale nuclear war is greater than 10%.

All by itself, the first incident in the above list justifies my estimate when its explanation in Appendix I and other available information are considered. A fundamental rethinking of national security and foreign relations is needed in the nuclear age, a topic that will be discussed in section 7.

2. How risky was the Cold War?

Arguments made in later sections of this report only require that the risk of a full-scale nuclear war *just during the Cuban missile crisis* was greater than 10%, as was argued in the previous section. Even so, it is worth considering other Cold War incidents to get a fuller picture of the danger during that period.

Appendix II has a brief explanation for each of the following events. While, in my estimation and that of all international relations experts with whom I have talked, none of these events had a risk level that compared to the Cuban missile crisis, each had the potential to initiate a sequence of actions and reactions that would have brought us close to the nuclear abyss, as happened in 1962.

1. April 17-19, 1961: The US attempted to overthrow Castro in the failed Bay of Pigs invasion.
2. October 22-28, 1961: The Berlin Crisis led to a Soviet-American tank standoff.
3. November 22, 1963: JFK's assassination caused fear within the CIA of a Soviet attack.
4. June 5-10, 1967: According to Secretary of Defense McNamara, the Mideast Six Day War "damn near" led to war between the United States and the Soviet Union.
5. October 1969: Nixon's "Madman Nuclear Alert" caused unforeseen dangers.
6. October 6-25, 1973: The Mideast Yom Kippur War led to ominous Soviet threats.
7. November 9, 1979: A false alarm resulted in a 3 AM call to the president's National Security Advisor.
8. December 25, 1979: The Soviet invasion of Afghanistan heightened tensions.
9. June 20, 1983: US Proud Prophet war game escalated uncontrollably resulting in hundreds of millions killed.
10. September 1, 1983: South Korean airliner KAL 007 was shot down by the Soviets, killing 269 including a US Congressman.
11. November 1983: NATO's Able Archer exercise was seen as "one of the potentially most dangerous episodes of the Cold War" by former Secretary of Defense Robert Gates.

3. What was the risk of a major nuclear war in “normal” post-Cold War times, before the Russian invasion of Ukraine?

Prior to the war in Ukraine, and even to some extent after Russia’s invasion, society has tended to dismiss the post-Cold War risk of a nuclear war as a nightmare of the past. For example, on March 25, 2014, President Obama called Russia⁶ “a regional power” and said he was “much more concerned when it comes to our security with the prospect of a nuclear weapon going off in Manhattan.”

Russia’s invasion of Ukraine clearly has increased the risk of a nuclear war, so this section deals with “normal” post-Cold War times, meaning from roughly 1990 up to Russia’s invasion on February 24, 2022. The next section will treat the current “abnormal” time, during which war is raging in Ukraine and the risk is elevated.

Before discussing the post-Cold War level of risk from a quantitative point of view, it helps to look at it qualitatively. The previous two sections, along with Appendices I and II, give such a qualitative perspective for the risk during the Cold War. The following list of events since 1990 does the same for the post-Cold War period and each of these events is briefly described in Appendix III.

1. 1991 Soviet coup attempt produces chaos and nuclear risk.
2. 1993 Russian Constitutional Crisis leads to shelling of its Parliament building.
3. 1994-present, North Korean nuclear crisis almost leads to war several times.
4. 1995-1996, Third Taiwan Straits Crisis creates the possibility of a war with China.
5. 1999-present, NATO expansion heightens Russian-American tensions.
6. 1999 Pristina Airport crisis causes a British 3-star to tell an American 4-star, “Sir, I’m not starting World War III for you.”
7. 2004, US war games escalate uncontrollably.
8. 2008 Cuban bomber mini-crisis almost becomes a full-blown crisis.
9. 2008 Georgian War.
10. 2012-present, Senkaku-Diaoyu Islands dispute results in aerial and naval games of chicken.
11. 2014-September 24, 2022, Ukrainian crisis smolders.
12. 2015, Turks shoot down a Russian jet.
13. 2018, US war games escalate uncontrollably, ending in global nuclear war.
14. February 24, 2022, Russia invades Ukraine.

⁶ The White House, Office of the Press Secretary, “Press Conference with President Obama and Prime Minister Rutte of the Netherlands, March 25, 2014,” The Hague, The Netherlands, [accessible online](#).

Additional qualitative arguments about the risk of a major nuclear war are contained in a March 2021 article by Dr. Vinton Cerf.⁷ That article is in two parts, with Cerf arguing for a qualitative approach and me arguing for a quantitative one. I agree with Cerf that most people relate better to a qualitative approach, but a quantitative rationale is also needed to counter arguments that it is just our opinion that the risk of a nuclear war is too high.

Turning to my quantitative approach, in that article I argued that the risk of a major nuclear war was on the order of 1% per year, meaning that it might have been as large as 3% per year or as small as 1/3% per year. But it almost certainly was not 10% per year or 0.1% per year.

I justified my estimate by noting that 10% per year is almost surely too high. In that case, we would have expected six such wars over the last sixty years and a reasonable model, known as Poisson arrivals, would give only one chance in four hundred of no such wars over that period of time. And, of course, no such wars have occurred.

I then ruled out 0.1% per year by noting that, at that level of risk, we would expect to survive 1,000 years if our current approach to nuclear deterrence were to remain unchanged.⁸ When I wrote that article in 2021, we had experienced only one major crisis where we teetered dangerously close to the nuclear abyss, namely the 1962 Cuban missile crisis. So, even before Russia's invasion of Ukraine, it was reasonable to assume that we would experience a similar crisis about once every sixty years. Now it is unfortunately easier to justify. Under that assumption, we would experience ten to twenty such major crises over 1,000 years. Based on the analysis of the Cuban missile crisis in section 1 and Appendix I, it seemed imprudent to expect that we would survive that many major crises.

Having ruled out ten times larger (10% per year) and ten times smaller (0.1% per year), that leaves 1% per year as the order of magnitude estimate for the risk of a major nuclear war prior to the Russian invasion of Ukraine.⁹

A risk of 1% per year corresponds to playing “nuclear roulette” — a global version of Russian roulette — about once every fifteen years.

Those who argue that a nuclear war is unlikely over that period of time are probably right. In Russian roulette, there are five chances out of six of surviving. But even one nuclear bullet in a gun with six chambers is too much, especially if the trigger is pulled not just once, but repeatedly.

Unless we change our approach to foreign affairs in a fundamental way to be discussed in section 7, it is not a question of *if* the gun will go off, only *when*. On our current path, nuclear war is inevitable. We need to stop pulling the trigger in this existential game.

⁷ Vinton G. Cerf and Martin E. Hellman, “An existential discussion: What is the probability of nuclear war?”, *Bulletin of the Atomic Scientists*, March 18, 2021, [accessible online](#). Dr. Cerf is one of the two people [most responsible for the Internet](#).

⁸ While things will change in major ways over the next 1,000 years, I am only using that 1,000-year time period to estimate the *current* annualized risk. Hence, while [saying that](#) much will change over the next 1,000 years is true, it is also irrelevant.

⁹ In June 2021, several month after I published that estimate, former Secretary of Defense William Perry told me that he agreed with it and gave me permission to quote him on that. Secretary Perry holds a doctorate in mathematics, so he is fluent in quantitative arguments.

4. What is the risk of a major nuclear war now that war is raging in Ukraine?

In the last section, I argued that, prior to Russia's invasion of Ukraine, we were playing nuclear roulette about once every fifteen years. The war in Ukraine has clearly elevated the risk and I now estimate that the trigger is being pulled in that macabre game about once every year that this war drags on. In addition to that nuclear risk, the human suffering in Ukraine makes it imperative to bring this war to an end as soon as possible.

Of course, the war needs to be ended in a way that does not reward Russian aggression, and I will not pretend to have a complete solution to that conundrum. But we need to start by recognizing that the situation is more complex and more dangerous than in the narrative portrayed in the West.

Eric Schlosser's June 2022 article in *The Atlantic*¹⁰ states that, "During the past month, I've spoken with many national-security experts and ... I heard the same point again and again: The risk of nuclear war is greater today than at any other time since the Cuban missile crisis."

Later in that article, Schlosser quotes former Secretary of Defense William Perry as believing that the risk of a nuclear weapon being used in this conflict is *even higher* than during the Cuban missile crisis. While Secretary Perry's estimate was for the use of a single nuclear weapon, once the nuclear threshold is crossed, previously inconceivable dangers rear their heads.

For example, that same article states that, should Putin use a nuclear weapon in Ukraine, noted Stanford political scientist Scott Sagan "would advocate American conventional attacks on Russian forces in Ukraine, Russian ships in the Black Sea, or even military targets inside Russia." And he is far from alone, with Gen. David Petraeus recently advocating¹¹ similar responses. Should America attack Russian forces, that would almost surely lead to a response by Putin, with unpredictable and potentially catastrophic consequences.

While President Biden has resisted calls for establishment of a no-fly zone and other actions that would result in direct combat with the Russians, in many ways the United States is already at war with Russia. US intelligence helped Ukraine sink the flagship of the Russian Black Sea fleet.¹² And it has been stated that, "The United States has provided intelligence about Russian units that has allowed Ukrainians to target and kill many of the Russian generals who have died in action."¹³ While these actions have generally been celebrated, we need to think through their ramifications. How would the United States respond if Russian intelligence helped sink an American ship or kill a dozen American generals?

The risk is also increased because most Americans see this war as Russia's fault, end of story. While Russia is most responsible for the war, the reality is more complicated and all nations involved bear some responsibility. A poll conducted in Ukraine by the University of Chicago in June of 2022 found that 58% of Ukrainians see the United States as bearing at least some

¹⁰ Eric Schlosser, "What if Russia uses nuclear weapons in Ukraine?", *The Atlantic*, June 2022, [accessible online](#).

¹¹ Edward Helmore, "Petraeus: US would destroy Russia's troops if Putin uses nuclear weapons in Ukraine, *The Guardian*, October 2, 2022, [accessible online](#).

¹² Helene Cooper, Eric Schmitt, and Julian E. Barnes, "U.S. Intelligence Helped Ukraine Strike Russian Flagship, Officials Say," *New York Times*, May 6, 2022, p. A1, [accessible online](#).

¹³ Julian E. Barnes, Helene Cooper, and Eric Schmitt, "U.S. Intelligence Is Helping Ukraine Kill Russian Generals, Officials Say," *New York Times*, May 5, 2022, p. A1, [accessible online](#).

responsibility for the war.¹⁴ Of course, an even larger fraction, 85%, said the same about Russia. But, surprisingly, 70% said that about their own Ukrainian government. People who have first-hand knowledge of how this conflict developed may know something that we in the United States need to take into account as we develop strategies for dealing with this war.¹⁵

Most Americans also do not know that in 2019 forty member of Congress asked the State Department to declare Ukraine's Azov Battalion a Foreign Terrorist Organization because of its neo-Nazi roots.¹⁶ Instead, that force was referred to only in heroic terms for its recent defense of Mariupol's Azovstal steel works, with almost no mention of its ideology. A Reuters dispatch is one of the few exceptions.¹⁷

While Azov has become more nationalistic and less neo-Nazi over time, it still has dangerous tendencies. For example, in 2019, when President Zelensky tried to withdraw forces from the town of Zolote as part of the Minsk Accords to bring peace to the Donbass, Azov veterans refused to leave.¹⁸ War brings out the best and the worst in a nation, so it is not surprising that Putin also has neo-Nazis fighting on his side.¹⁹

Adding to the risk is the lack of a clearly stated goal for US involvement. President Biden said of Putin, "For God's sake, this man cannot remain in power."²⁰ Nancy Pelosi stated that, "We stand with Ukraine until victory is won."²¹ And Secretary of Defense Lloyd Austin asserted that we want "Russia weakened to the point where it can't do things like invade Ukraine."²²

We need to think through which of those goals are likely to be achievable; the costs to Ukraine of trying to achieve them; the effects on the world's poorest nations as food prices soar; and, most fundamentally, their effect on the level of nuclear risk that our nation bears, along with the rest of the world.

¹⁴ Wall Street Journal/National Opinion Research Center at the University of Chicago, "WSJ/NORC Ukraine Poll June 2022," June 2022, [accessible online](#).

¹⁵ I spoke with one of the poll's lead researchers at the University of Chicago to confirm its authenticity. The only major bias that she identified made it more pro-Ukrainian: the poll used Ukrainian cell phone numbers and many Ukrainians living in Russian-controlled territory are now unreachable that way.

¹⁶ Max Rose and Ali H. Soufan, "We Once Fought Jihadists. Now We Battle White Supremacists," *New York Times*, February 13, 2020, p. A27, [accessible online](#).

¹⁷ "Factbox: Last defenders of Mariupol: what is Ukraine's Azov Regiment?," *Reuters*, May 17, 2022, [accessible online](#).

¹⁸ Liza Rozovsky, "The Truth About Ukrainian Nationalism and Claims It's Tainted by Nazism," *Haaretz*, June 1, 2022, [accessible online](#).

¹⁹ "Who Are The Neo-Nazis Fighting For Russia In Ukraine?," Radio Free Europe/Radio Liberty, May 27, 2022, [accessible online](#).

²⁰ The White House, "Remarks by President Biden on the United Efforts of the Free World to Support the People of Ukraine," March 26, 2022, [accessible online](#).

²¹ Nancy Pelosi, "Transcript of U.S. Congressional Delegation Press Conference in Rzeszów, Poland," May 1, 2022, [accessible online](#).

²² U.S. Department of State transcript, "Secretary of State Antony J. Blinken and Secretary of Defense Lloyd J. Austin III Remarks to Traveling Press," April 25, 2022, [accessible online](#).

I now turn to justifying my estimate that we are playing nuclear roulette about once each year that the war in Ukraine drags on. The risk is clearly significantly greater than the 1% per year that I estimated in the previous section which applied only pre-invasion. An order of magnitude larger would be 10% per year, but I prefer to call it 1% per month (which is essentially the same at this level of accuracy) since it emphasizes the need to bring the war to a rapid conclusion. At least an order of magnitude increase in the risk seems justified on the basis of the qualitative considerations enumerated above, in particular:

- * US intelligence allowing the sinking of the *Moskva* and the killing of roughly a dozen Russian generals.
- * Secretary Perry's belief that the risk of the use of a single nuclear weapon is even greater than during the Cuban missile crisis.
- * The likely US response should Russia use a nuclear weapon.
- * The overly simplified narrative that prevails in the West.

A surprising recent statement by Valerii Zaluzhnyi, Commander-in-Chief of the Armed Forces of Ukraine, provides additional evidence: "There is a direct threat of the use, under certain circumstances, of tactical nuclear weapons by the Russian Armed Forces. ... It is also impossible to completely rule out the possibility of the direct involvement of the world's leading countries in a 'limited' nuclear conflict, in which the prospect of World War III is already directly visible."²³

Given the above information, even an order of magnitude larger risk, 10% per month, might be argued, but 1% per month is bad enough, all by itself. At that level of risk, we are pulling the trigger in nuclear roulette about once every 15 months, which I rounded to once a year given the wide range encompassed by such an order of magnitude estimate.

But are we playing nuclear roulette? Or is the nuclear command and control system so well thought out that luck does not play much of a role and my analogy to Russian roulette is unwarranted? That question is treated in the next section.

²³ Miriam Berger, "Ukraine military chief says 'limited' nuclear war cannot be ruled out," *Washington Post*, September 7, 2022, [accessible online](#).

5. The role of luck.

Some believe that luck is irrelevant and that we have not had a third world war because nuclear deterrence can work into the indefinite future. Former Secretary of Defense James Schlesinger was in this camp when he said in 2009, “We will need a strong [nuclear] deterrent ... more or less in perpetuity.”²⁴

In contrast, I see luck as playing a role, which is why I say we are playing a global version of Russian roulette.²⁵ The nuclear priesthood cannot ensure that empty chambers in the gun appear under the hammer every time the trigger is pulled. There is some randomness. Caution induced by nuclear weapons probably has lengthened the time between pulls of the trigger, but luck is still involved.

The world was lucky to make it through the events listed in Appendices II and III without their dragging us as close to the nuclear abyss as happened during the Cuban missile crisis. Similarly, we were lucky to make it through the Cuban missile crisis without falling into the nuclear abyss.

Luck played a clear role in the 1999 Pristina Airport Crisis, described in Appendix III’s item 6. A more dangerous situation would have resulted if the British three-star had not refused the American four-star’s order by saying, “Sir, I am not starting World War III for you.” Given that two, high-level NATO officers differed, there is a reasonable chance that other such officers would have taken the action that risked starting World War III. And which officers are assigned to those positions depends on chance.

Appendix II’s item 9 and Appendix III’s items 7 and 9 describe war games that were supposed to stay limited, but that escalated uncontrollably to nuclear war.²⁶ These provide evidence that we have dodged the nuclear bullet by not getting into a war between the major powers where such escalation could occur, but Ukraine is testing that fire break.

Another example of luck helping to avoid a nuclear war occurred during the Cuban missile crisis. While initially there was strong support within President Kennedy’s ExComm for air strikes on the Soviet missiles, to be followed by an American invasion in force, President Kennedy and some of his advisors eventually realized the risk inherent in such a strategy and adopted a naval quarantine instead. With the possible exception of Maxwell Taylor, the Joint Chiefs were furious with the president’s “lack of resolve” and pushed for military action.

Fortunately (luckily), the Bay of Pigs fiasco a year earlier helped Kennedy question the wisdom of his military advisers. If that attempted invasion had not occurred, he would have been more prone, but not certain, to have followed their advice. Americans only learned decades later that the Soviets had tactical nuclear weapons on Cuba that could repel such an invasion. Appendix I, item 2 has more details.

So luck is definitely involved and we are playing nuclear roulette. If we keep pulling the trigger, eventually the gun will go off. We cannot stay lucky forever.

²⁴ Melanie Kirkpatrick, “Why We Don’t Want a Nuclear-Free World,” *Wall Street Journal*, July 11-12 2009, p. A9, [accessible online](#).

²⁵ Prof. Benoît Pelopidas of Sciences Po is a key proponent of the idea that luck has been essential in our avoidance of World War III. See, for example, his [2017 paper](#), “The unbearable lightness of luck. Three sources of overconfidence in the controllability of nuclear crises.” His recent book, *Repenser les choix nucléaires*, also treats this idea and is currently available in French.

²⁶ While Appendix III’s item 7 does not say explicitly that nuclear war resulted, it is a reasonable assumption. In any event, the other two war games definitely escalated to nuclear war.

As I write this in early October 2022, President Biden is warning of “Armageddon” and our luck appears to be running thinner in Ukraine. We need to better understand how we got into this mess so we can avoid it in the future. That’s the subject of the next section.

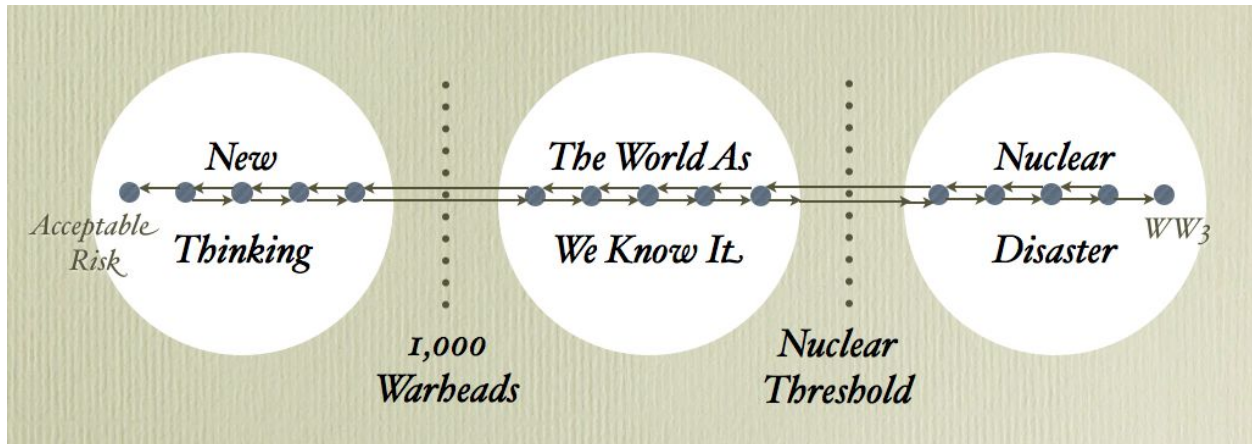
6. Reducing the risk via a process of change.

When confronted with the specter of nuclear war, many people understandably jump to nuclear disarmament as the solution. If there were no nuclear weapons, the reasoning goes, there couldn’t be a nuclear war. But the real solution is both bigger and smaller.

Bigger because it involves a long-range process that requires fundamental changes in how we think about national security, yet smaller because the first steps in that process are possible in the current environment, which nuclear disarmament is not.

This process requires that we learn from our mistakes (e.g., Vietnam, Afghanistan, Iraq, and Libya²⁷) and develop a better approach to foreign affairs. As former Secretary of Defense James Mattis said in 2013, “if you don’t fund the State Department fully, then I need to buy more ammunition.”²⁸ If Secretary Mattis’ advice is heeded, we can build a more peaceful world where specific proposals, such as nuclear disarmament, might become possible.

The figure below, taken from a 2011 paper²⁹ that I wrote for the *Bulletin of the Atomic Scientists*, graphically conveys the long range process of change needed to resolve the nuclear dilemma. In systems theory, it is called a state diagram, with *state* referring to a particular condition of the world — not a nation state. The following explanation from that paper has been updated to reflect current conditions.



²⁷ For more details see the short sections on three of those nations in a book my wife and I wrote and that is [freely available as a PDF](#).

²⁸ Senate Armed Services Committee Hearings, “Defense Authorization for Central Command and Special Operations,” March 5, 2013, [video accessible online](#). General Mattis’ quote starts at 51:50.

²⁹ Martin E. Hellman, “How risky is nuclear optimism?”, *Bulletin of the Atomic Scientists* Vol. 67, No. 2, March 2011, pp. 47-56, [accessible online](#).

This diagram breaks down a catastrophic failure of nuclear deterrence into a sequence of smaller, partial failures known as an accident chain. The large circle labeled *The World As We Know It* is a super-state that includes all possible states (conditions of the world) that we have known in the era of nuclear deterrence. Each such state is depicted by a small circle or dot, and the arrows indicate possible moves from one state to another as international tensions rise and fall.

During the Cuban Missile Crisis of 1962, the world was in a state close to the *Nuclear Threshold*. When I wrote that paper in 2011, we were in one of the states near the middle of *The World As We Know It* super-state. Unfortunately, the war in Ukraine again has us dangerously close to the *Nuclear Threshold* — even closer than in 1962 in the opinion of former Secretary of Defense William Perry.³⁰

Examples of moves in that negative direction include the deployment of American nuclear missiles in Turkey in the Spring of 1962, the deployment of Soviet nuclear missiles in Cuba in the Fall of 1962, the 2003 American invasion of Iraq, and Russia's recent invasion of Ukraine.³¹

The super-state, labeled *Nuclear Disaster*, includes all possibilities after a nuclear weapon has been used in anger. As devastating as the use of a single nuclear weapon would be, if cooler heads prevailed and escalation was averted, the world would recover in time, as indicated by the arrow re-crossing the *Nuclear Threshold* in the positive direction. The extreme state labeled *WW3* represents a full-scale nuclear exchange and is shown as a state of no return, indicated by the lack of a return arrow to any other state in the diagram.³²

This state diagram helps explain why people have difficulty envisioning the possibility of a nuclear disaster: There is no direct path across the nuclear threshold from the usual states that we occupy. Those who discount the risk of a nuclear war would be right if we never made enough mistakes to come close to the nuclear threshold. But, just as a sequence of miscalculations resulted in the Cuban Missile Crisis of 1962, our continued reliance on nuclear bluffs and Cold War-era nuclear strategies have again take us dangerously close to the brink.

The above figure also illustrates the positive possibility by breaking down the solution into a sequence of smaller, more credible steps. *The World As We Know It* super-state encompasses not only states of greater risk, but also states with greater hope.

Assuming that the war in Ukraine is eventually brought to a peaceful conclusion, we would return to a state near the center of that super-state. We then could further reduce the risk, step-by-step. One such step that the United States could take would be to investigate why 58% of Ukrainians in the aforementioned poll saw our nation as bearing at least some responsibility for the current war. It is noteworthy that doing so would not change our military posture. Hence arguments that any such steps would weaken America are wrong. Another

³⁰ Eric Schlosser, "What if Russia uses nuclear weapons in Ukraine?", *The Atlantic*, June 2022, [accessible online](#).

³¹ These four examples of negative moves include two by the United States and two by Russia. This is not intended to imply moral equivalence between them. Whether there is such an equivalence is a matter of perspective that is not important to the main thrust of this report. Hence it does not take a position and leaves it to the reader to form his or her own opinion.

³² It is not known whether civilization could recover from a full-scale nuclear war. If the possibility that it would recover were to be included in the diagram, a dotted arrow should be added from *WW3* to whichever state one thinks the world would return.

such possible move, discussed in the next section, would be to rethink national security at a fundamental level — a move that again would not weaken our nation.

If we make enough such moves, and if they are reciprocated, we can eventually cross a positive threshold, defined here as a worldwide arsenal of 1,000 nuclear weapons. While a world with 1,000 weapons is still very dangerous, reducing the arsenal to that level will require a fundamental shift in human thinking. I have therefore called the super-state that is reached when we cross that threshold the *New Thinking* super-state. A hopeful sign, discussed in the next section, is that we are currently almost half way from the peak of the arms race to this threshold.

Reaching that intermediate goal will require a large reduction in the world's current nuclear arsenal. Yet, for better or worse, such a reduced arsenal still would support nuclear deterrence, eliminating the many arguments that have been made against nuclear abolition. During the Cuban Missile Crisis, President Kennedy was deterred from attacking Cuba out of fear that even a few missiles might survive and destroy Miami or Washington. So 1,000 warheads would continue to allow nuclear deterrence.

The above figure illustrates another advantage of the risk-based approach to deterrence. The ultimate goal is to reduce the risk of a nuclear disaster to an acceptable level, indicated by the end state named *Acceptable Risk*.³³ This approach has advantages over explicitly describing that goal. Some have characterized it as world peace, others as world government, and yet others as nuclear abolition. Calling it a state of acceptable risk avoids arguments about its exact nature, as well as whether it can be achieved.

Discovering the exact nature of the goal is better deferred until we are closer to it and better able to discern its outlines. From our current vantage point, it is too easy for opponents to deride explicit goals, such as nuclear abolition, as fantasies.³⁴ In contrast, it is hard to argue that we should not strive to reach a state of acceptable risk.

The lack of a direct path from our current state to the desired end state explains why many people dismiss solutions to the nuclear dilemma as impossible dreams. Completely solving the problem is impossible in our current environment. But, once we move to lower risk states, the environment changes and new possibilities come into clearer view.

³³ Calling the goal a state of acceptable risk also raises the question of what would be an acceptable level of risk, a question that deserves far more attention than it has received. One attempt at formulating an acceptable level of risk is mentioned in Eric Schlosser, *Command and Control: Nuclear Weapons, the Damascus Accident, and the Illusion of Safety*, Penguin, New York, 2013, pp. 170-171:

The Army's Office of Special Weapons Developments had addressed the first question [What was the "acceptable" probability of an accidental nuclear explosion?] in a 1955 report ... It looked at the frequency of natural disasters in the United States during the previous fifty years, quantified their harmful effects according to property damage and loss of life— and then argued that accidental nuclear explosions should be permitted on American soil at the same rate as similarly devastating earthquakes, floods, and tornadoes. According to that formula, the Army suggested that the acceptable probability of a hydrogen bomb detonating within the United States should be 1 in 100,000 during the course of a year. The acceptable risk of an atomic bomb going off was set at 1 in 125.

In addition to being just one institution's opinion, the above probabilities are for a single nuclear detonation, not a full-scale nuclear war.

³⁴ Harold Brown and John Deutch, "The Nuclear Disarmament Fantasy," *Wall Street Journal*, November 20, 2007, [accessible online](#).

The first critical step is for society to recognize the unacceptable level of risk that it currently faces. Until that is accomplished, there will be inadequate interest in alternatives to the nuclear *status quo*.

A second key step is for society to recognize that three goals which are usually seen as separate are inextricably coupled: eliminating the nuclear threat, building a more peaceful world, and developing a more rational foreign policy.

As explained earlier, the first step in removing the nuclear threat is not, as many assume, nuclear disarmament. Rather, we must first learn from our past mistakes, develop a better approach to foreign affairs, and build a more peaceful world. Only then might specific proposals such as nuclear disarmament be seriously examined.

Those are daunting tasks, but the next section illuminates hopeful signs that humanity can rise to this existential challenge.

7. Reasons for Hope

It is both surprising and hopeful that we are almost half way from the peak of the arms race to the *New Thinking* threshold of 1,000 warheads worldwide defined in the last section. That is because the world's nuclear arsenal peaked at 70,300 warheads in 1986 and is currently 12,700,³⁵ a reduction by a factor of 5.5. Another reduction by that same factor would take us to approximately 2,300 warheads. That is not quite to the threshold of 1,000, but it is close. So we are not quite half way there. To be more precise, we are 40% of the way to that intermediate goal.³⁶

Hope can also be seen in an October 2001 column by Michael McFaul,³⁷ who was later Obama's Ambassador to Moscow:

Putin's policies of support after September 11, including his agreement to an American military presence in Central Asia, represented a significant shift in Russian foreign policy. The potential for breakthrough — for a fundamentally new and improved relationship between Russia and the West — has never been greater. ... Bush and his administration as well as congressional leaders must take advantage of this window of opportunity in Russian-American relations to truly end the Cold War.

Today, McFaul is on Russia's sanction list and no love is lost between him and Putin. So it is valuable to look at what happened in the twenty-one years since McFaul wrote that and see if there is anything that the United States might have done differently and that might have avoided the war in Ukraine.

³⁵ Federation of American Scientists, "Status of World Nuclear Forces," 2022, [accessible online](#).

³⁶ For the mathematically inclined: $[\log(70,300/12,700)] / [\log(70,300/1,000)] = 40.2\%$ which I rounded to 40%. The current, highly elevated risk as a result of the war in Ukraine shows that reduced numbers alone do not provide safety, which is evidence in favor of my earlier argument that nuclear disarmament by itself would not make the world safe. I have used a logarithmic scale, while those who prefer a linear scale will find that we are more than 80% of the way to the New Thinking threshold since $[(70,300 - 12,700)/(70,300 - 1000)] = 83.1\%$.

³⁷ Michael McFaul, "U.S.-Russia Relations After September 11, 2001," Carnegie Endowment for International Peace, October 24, 2001, [accessible online](#).

Most fundamentally, McFaul’s advice “to truly end the Cold War” was not taken. While most Americans thought of that conflict as ending with the fall of the Berlin Wall, the incidents listed in Appendix IV show that it was alive and well, biding its time until it could roar back to life on February 24, 2022, when Russia invaded Ukraine. This “quiet Cold War” was not very visible in the West, but painfully obvious within Russia — most notably with respect to NATO expansion.

Another hopeful sign is that a former Secretary of Defense, a former Director of NSA, and a former Chairman of the National Intelligence Council have all signed a statement of support³⁸ for my project on Rethinking National Security that asks:

In this age of nuclear weapons, pandemics, cyberattacks, terrorism, and environmental crises, is national security becoming inseparable from global security? If so, how do our current policies need to change?³⁹

With Russia brutally attacking Ukraine, this approach might seem naive. What happens if the United States changes its policies to be consistent with the realities of the current age, but our adversaries do not?

First, it is important to recognize that *rethinking* national security does not involve any concrete changes to our national posture, so the argument that the United States will become vulnerable is a straw man.

Second, while I cannot be certain that such an approach would bear fruit, I suspect that it would, and the alternative is bleak enough that it seems worth trying. Critics tend to frame the choice as between nuclear disarmament — which I am not proposing at this point in the process — and business as usual. But there are many options in between those two extremes, with rethinking national security being an excellent first step in the positive direction of the above state diagram.

Another reason for hope may seem paradoxical at first. Over the forty years that I have worked on eliminating the nuclear threat, many people have told me I was on a fool’s errand. That is hopeful because many of the best ideas appear foolish before they pay off. That was certainly true for me.

My work in cybersecurity has won some of the highest awards in that profession, including the million dollar ACM Turing Award, the top prize in computer science. Yet, until I started getting the results that led to that award, all of my colleagues told me that I was on a fool’s errand.

The same was true for many other technological breakthroughs, including packet switching (which is at the heart of the Internet), DSL (which provides much of the world’s broadband service), the microprocessor, and GPS. For details and quotes from the pioneers of those technologies, see my 2013 address to Stanford’s Engineering School on “The Wisdom of Foolishness.”⁴⁰

³⁸ Statement on Rethinking National Security, 2019, [accessible online](#).

³⁹ A report that I wrote builds on this fundamental question by examining a number of assumptions that form the foundation for our current approach to national security, but that turn out to be questionable on closer examination: M. E. Hellman, “Rethinking National Security,” a Special Report of *The Federation of American Scientists*, April 2019, [accessible online](#).

⁴⁰ Martin E. Hellman, “The Wisdom of Foolishness,” Stanford Engineering Hero Lecture, January 29, 2013, video [accessible online](#).

When I was honored to address the 2019 annual meeting of Nobel Laureates in Lindau, Germany,⁴¹ I asked five of the Laureates in attendance whether the work that had won them their prizes had initially been encouraged as brilliant or discouraged as crazy. Four of them said “crazy.” Danny Shechtman, who won the 2011 Nobel Prize in Chemistry “for the discovery of quasicrystals,” even told me that two-time Nobel Laureate Linus Pauling had dismissed that work as “quasi-science.”

Another reason for hope is the movement to address climate change, cyber threats, AI, and other technological risks. While, at first, those efforts might seem to take mind share away from the nuclear threat, those risks are symptoms of a deeper underlying problem that must be solved to address them all: the chasm between the godlike physical power that technology has given humanity and our species’ at best irresponsible adolescent behavior.

In the Judaeo-Christian tradition, only God was supposed to have the power to destroy cities with thunderbolts. Today, we can do the same with nuclear weapons. Similarly, only God was supposed to have the power to create a flood that would necessitate Noah building an ark, whereas human-induced global warming threatens similar devastation.

Society’s maturity level pales in comparison to the godlike physical power that technology has given us. Humanity is like a sixteen-year-old with a new driver’s license who somehow got his hands on a 500-horsepower Ferrari. We will either grow up really fast or we will kill ourselves.

While even society’s efforts to address climate change are not yet commensurate with the magnitude of the risk, at least we have made a start. In comparison, very few people are aware of and working on the nuclear threat. By illuminating the connection between all of the technological threats we face, I see hope that we can accelerate progress on them all.

Most fundamentally, there is hope because humanity’s survival drive is so strong and, for us to survive, the nuclear dilemma must be resolved.

⁴¹ Martin E. Hellman, “The Technological Imperative for Ethical Evolution,” address to the 2019 annual meeting of Nobel Laureates, Lindau, Germany, July 3, 2019, accessible online [as a video](#) and [in written form](#).

8. Conclusion

This sixtieth anniversary of the Cuban missile crisis provides an excellent opportunity to reflect on the mistakes that both sides made to bring humanity dangerously close to the nuclear abyss. A year ago, when I first contemplated writing this paper, I hoped to say that we should never again behave so irresponsibly. Yet today, with war raging in Ukraine, we are again dangerously close to nuclear disaster.

Just as both sides made mistakes sixty years ago, the previously cited poll — in which most Ukrainians see both Russia and the United States as bearing some responsibility for the current war — shows that we may have more power to end this war than we think. If it were all Putin's fault and the United States had done nothing wrong, we would be powerless to end it. But, if we will seek out the mistakes that we have made, we will reclaim power to start a process that might end the human suffering in Ukraine as well as the nuclear risk that is creating.

If we will do that, then I can say what I had hoped to say a year ago. Never again should we behave so irresponsibly that we find ourselves dangerously close to the edge of the nuclear abyss.

Reaching a state of acceptable nuclear risk requires that we stop clinging to security blankets that no longer work. We need to courageously face reality and develop a new approach to national security — one that will allow us to eventually make the nuclear threat a nightmare of the past.

If we will do that, we will build a world that we can be proud to bequeath to future generations. We will have transformed the nuclear threat into the nuclear opportunity.

9. Acknowledgments

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Appendix I: Some events that heightened the risk of the Cuban missile crisis.

The events described in this appendix are helpful in estimating the level of risk that our nation faced during the Cuban missile crisis, and that it would face if a similar crisis should reoccur.

Estimates made at the time of the crisis also need to be reevaluated in light of information that only became known afterward, such as the first two items below.

1. American destroyers attacked three Soviet submarines that, unbeknownst to any Americans, were armed with nuclear torpedoes, and at least one sub is alleged to have come close to using that weapon. On October 27, at the height of the crisis, American destroyers intercepted a Soviet submarine near the quarantine line and forced it to surface by dropping “practice depth charges.” Just twenty years ago, so forty years after the crisis, we learned that this and two other Soviet submarines that also were forced to surface carried nuclear torpedoes.⁴² The presence of these nuclear weapons was unknown to their attackers or to any other Americans at that time.

According to a member of the submarine crew, its captain was under severe physical and psychological pressure; mistook the practice depth charges for regular “killer” depth charges; believed that World War III might already have started; and gave orders for the nuclear torpedo to be armed. Fortunately, according to this same crew member, the captain was talked down and suffered a humiliating defeat by surfacing.⁴³

2. American decision makers who advocated invading Cuba did not know that the Soviets had battlefield nuclear weapons on Cuba that could be used to repel such an attack. While President Kennedy eventually decided on a naval blockade, he and almost all the other American decision makers initially favored airstrikes against the missiles, to be followed by an invasion.⁴⁴ None of these decision makers knew that the Soviets had placed battlefield nuclear weapons on Cuba to deter and, if need be, to repel such an invasion.⁴⁵ That reality only became known to America and the world thirty years after the crisis.

Significant support for an invasion continued even after Kennedy had moved from that option to the naval quarantine announced in his October 22 television address. An October 28 Top Secret Memorandum for the Secretary of Defense from the Joint Chiefs of Staff concluded

⁴² William Burr and Thomas S. Blanton, “The Submarines of October: U.S. and Soviet Naval Encounters During the Cuban Missile Crisis,” National Security Archive Electronic Briefing Book No. 75, October 31, 2002, [accessible online](#).

⁴³ William Burr and Thomas S. Blanton, *ibid*.

⁴⁴ Sheldon M. Stern, *The Week the World Stood Still: Inside the Secret Cuban Missile Crisis*, Stanford University Press, Stanford, CA, 2005, pp. 40-41, 67-69, 87-90. Sheldon Stern was the Historian at the John F. Kennedy Presidential Library from 1977 to 1999 and is often regarded as the world’s leading expert on deciphering the low-quality audio tapes which JFK secretly made of many meetings during his presidency. Stern’s book is derived from those tapes.

⁴⁵ Aleksandr Fursenko and Timothy Naftali, *One Hell of a Gamble*, W. W. Norton & Company, New York, 1997, p. 212.

“that the only direct action which will surely eliminate the offensive weapons threat is air attack followed by invasion and is, in the long run, the best course of action.”⁴⁶

3. At the height of the crisis, an American U-2 strayed into Soviet airspace, creating a risk that nuclear air-to-air missiles would be used. On October 27, which became known as “Black Saturday,” a U-2 piloted by USAF Captain Chuck Maultsby⁴⁷ became lost on an intelligence gathering mission over the Arctic and accidentally flew into Soviet airspace. MiG fighters were scrambled to intercept Maultsby, while F-102s from Alaska were sent to protect him and escort him home. Due to the crisis, the F-102s’ conventional air-to-air missiles had been replaced with nuclear-armed missiles. As noted by Stanford Professor Scott Sagan, “the only nuclear weapons control mechanism remaining was the discipline of the individual pilots in the single seat interceptors. The critical decision about whether to use a nuclear weapon was now effectively in the hands of a pilot flying over Alaska.”⁴⁸ Fortunately, the MiGs never reached Maultsby’s U-2 or the nuclear-armed F102s.

4. Approximately one hour later, an American U-2 was shot down over Cuba, killing the pilot. Soon after Maultsby became lost and penetrated Soviet airspace, USAF Major Rudolf Anderson was shot down and killed by a Soviet surface-to-air (SAM) missile while on a U-2 reconnaissance mission over Cuba. Four days earlier, JFK and his advisors had agreed that, if a SAM downed a U-2, the offending SAM site would be attacked.⁴⁹ But, when Major Anderson’s U-2 was shot down, Kennedy had second thoughts, probably because our killing Soviet personnel would put Khrushchev in the same escalatory bind in which Kennedy found himself. Kennedy’s reversal infuriated the military.⁵⁰

⁴⁶ “Note by the Secretaries to the Joint Chiefs on Alternative Actions if Build-up in Cuba Continues Despite Russia Acceptance of the Quarantine,” October 31, 1962, [accessible online](#). The suspicions of the Joint Chiefs were not unwarranted since the Soviets earlier had lied about the presence of the missiles. However, unknown to the Chiefs, the Soviet battlefield nuclear weapons increased the risk that their proposed solution would lead to nuclear war.

⁴⁷ While it is not critical to what I say above, some accounts refer to Maultsby as a major in the Air Force, while others call him a captain. I have used the latter since [it comes](#) from the usually reliable National Security Archive website. I suspect that the references to him as a major were written after he had attained that rank.

⁴⁸ Scott D. Sagan, *The Limits of Safety: Organizations, Accidents, and Nuclear Weapons*, Princeton University Press, Princeton, NJ, 1995, pp. 136-137.

⁴⁹ Sheldon Stern, *The Cuban Missile Crisis in American Memory: Myths versus Reality*, Stanford University Press, Stanford, CA, 2012, p. 30 notes: “[JFK] rejected ExComm demands to implement his earlier decision to destroy the SAM site that had fired the fatal missile.” As noted earlier, Stern is one of the top scholars on these matters. A slightly “noisy” transcript of the tapes appears in Timothy Naftali and Ernest May (Editors), *The Presidential Recordings: John F. Kennedy: The Great Crises, Volume 3*, Norton, New York, 2001, p. 115. On p. 124 Kennedy refers to “this plan we just agreed on this morning” and the editors add in brackets “for retaliation if a U-2 were shot down.”

⁵⁰ National Security Archive chronology of the Cuban Missile Crisis, [accessible online](#), p. 377, column 1, first paragraph of 4:00 PM entry.

5. The United States had given numerous indications that it intended to invade Cuba, causing Castro to tell Khrushchev to launch his missiles preemptively. The goal of a two-week-long American military exercise involving tens of thousands of military personnel, which started the day before the crisis erupted, was to execute an amphibious assault on a Puerto Rican island whose fictitious dictator was named “Ortsac” – “Castro” spelled backwards.⁵¹ In the months before the missiles were discovered, congressmen, senators and the American media excoriated Kennedy for allowing the Soviet military buildup in Cuba, many demanding an invasion. The September 21 cover story in TIME magazine argued, “The only possibility that promises a quick end to Castro ... is a direct U.S. invasion of Cuba.”⁵² Castro became convinced that an invasion was imminent and, knowing of the Soviet battlefield nuclear weapons, he believed that a nuclear war would follow. He therefore suggested that Khrushchev “should launch a preemptive [nuclear] strike against United States.”⁵³

6. Seven months before the crisis, the Joint Chiefs of Staff (JCS) suggested blowing up an American ship in Guantanamo Bay and blaming Cuba in order to create support for an invasion. In March 1962, the Chairman of the Joint Chiefs, Army General Louis Lemnitzer, sent Defense Secretary Robert McNamara a list of proposals known as Operation Northwoods, outlining ways to generate American public support for an invasion of Cuba. Two suggestions read: “We could blow up a U.S. ship in Guantanamo Bay and blame Cuba. ... We could foster attempts on lives of Cuban refugees in the United States even to the extent of wounding [them].”⁵⁴

On the first day of the crisis, at a meeting of President Kennedy and his key advisors, Attorney General Robert F. Kennedy similarly suggested: “We should also think of whether there is some other way we can get involved in this through Guantanamo Bay ... you know, sink the Maine

⁵¹ Laurence Chang and Peter Kornbluh (Editors), *The Cuban Missile Crisis, 1962: A National Security Archive Documents Reader*, The New Press, New York, 1998, pp. 370-371. Note that the page numbers are for the 1998 edition, not an earlier one.

⁵² “The Nation: The Presidency: The Durable Doctrine,” *TIME*, vol. 80, No. 12, September 21, 1962, pp. 17-20; Robert Dallek, *An Unfinished Life*, pp. 539-540; and Richard Ned Lebow and Janice Gross Stein, *We All Lost the Cold War*, Princeton University Press, Princeton, 1994, pp. 20-21.

⁵³ Jerold L. Schecter, translator and editor, with Vyacheslav V. Luchkov, *Khrushchev Remembers: The Glasnost Tapes*, Little, Brown, Boston, 1990, pp. 176-177: “Castro suggested that in order to prevent our nuclear missiles from being destroyed, we should launch a preemptive strike against United States. He concluded that an [American] attack was unavoidable and that this attack had to be preempted. In other words, we needed to immediately deliver a nuclear missile strike against the United States.” After being removed from office, Khrushchev put these memoirs on tape and smuggled them out of the Soviet Union. This is a translation of those tapes. Their authenticity was initially questioned, but after censorship was lifted, Khrushchev’s son Sergei vouched for their authenticity

⁵⁴ “Memorandum for the Secretary of Defense: Justification for US Military Intervention in Cuba (TS),” March 13, 1962, [accessible online](#). This originally TOP SECRET document, signed by General L. L. Lemnitzer, Chairman of the Joint Chiefs of Staff, clearly shows the authenticity of these otherwise hard-to-believe facts. The quotes used in this report are in “Annex to Appendix to Enclosure A: Pretexts to Justify US Military Intervention in Cuba.” They are easier to find in [a searchable version](#) of the document.

again or something.”⁵⁵ RFK had made similar proposals at least twice before, on April 19, 1961, and August 21, 1962.⁵⁶

The Joint Chiefs advocated similar proposals during the crisis. On October 28, 1962, in a Top Secret Memorandum for the Secretary of Defense, they suggested “a series of provocative actions,” including having US destroyers “inadvertently” violate Cuba’s three-mile limit; “harass Cuban shipping;” and “incite riots on Cuban side of Guantanamo fence ... [to] justify our providing military assistance to laborers.” The memorandum stated that, “The purpose of these actions is to induce the Cubans to fire on US elements, or make some mistake which would make politically acceptable and justify subsequent US air strikes or invasion.”⁵⁷

While the above incidents might be hard to comprehend as serious proposals from today’s perspective, they fit the pattern of that time, including covert sabotage against Cuban targets and assassination attempts on Castro’s life. These incidents help to explain why Castro and Khrushchev were so fearful of an American invasion and the nuclear risk that produced.

7. President Kennedy took actions that extended the crisis in a more moderate form for months after the public thought it had ended. After Khrushchev agreed to remove his missiles from Cuba, Kennedy seized on a wording ambiguity⁵⁸ to expand his list of demands beyond removal of just the missiles. This kept the crisis simmering and out of public view.⁵⁹

When a minor part of the deal fell apart, Kennedy also questioned whether our pledge not to invade Cuba was still effective, even though that commitment was comparable in importance

⁵⁵ Timothy Naftali and Philip Zelikow, *The Presidential Recordings, vol. 2*, Norton, New York, 2001, p. 452; and Sheldon M. Stern, *The Week the World Stood Still: Inside the Secret Cuban Missile Crisis*, Stanford University Press, Stanford, CA, 2005, p. 50.

⁵⁶ Stephen G. Rabe, *The Most Dangerous Area in the World: John F. Kennedy Confronts Communist Revolution in Latin America*, University of North Carolina Press, Chapel Hill, 1999, p. 207, footnote 19.

⁵⁷ “Note by the Secretaries to the Joint Chiefs on Alternative Actions if Build-up in Cuba Continues Despite Russia Acceptance of the Quarantine,” October 31, 1962, [accessible online](#). This note is dated October 31, and includes the October 28 Memorandum.

⁵⁸ Instead of promising to remove the missiles, Khrushchev said he would remove “the arms which you described as offensive.” See U.S. Department of State, *FOREIGN RELATIONS OF THE UNITED STATES, 1961-1963, Volume XI, Cuban Missile Crisis and Aftermath*. The key message from Khrushchev to Kennedy is [accessible online](#). Khrushchev probably used these words to drive home the point that he regarded the missiles as defensive, intended not to attack the US but to prevent a second American invasion of Cuba. But Kennedy seized on this wording ambiguity to demand the removal of a number of additional weapons systems that he regarded as offensive.

⁵⁹ Laurence Chang and Peter Kornbluh (Editors), *The Cuban Missile Crisis*, The New Press, New York, 1998, p. 394, pp. 396-398. On November 5, 1962, Khrushchev warned Kennedy that his “additional demands ... [risk bringing] our relations back again into a heated state in which they were but several days ago.”

to the Soviets' promise to remove their missiles.⁶⁰ Plans for assassination attempts on Castro's life continued until at least 1963.⁶¹

8. In the month before the crisis erupted, Kennedy and Khrushchev each drew lines in the sand that later boxed them in. Under pressure from Congress and the press over the Soviet buildup President Kennedy on September 4 warned the Soviets that "the gravest issues would arise" if they introduced "offensive ground-to-ground missiles" into Cuba.⁶² When the Cuban missiles were discovered in mid-October and nuclear war seemed imminent, Kennedy noted in an ExComm meeting that "it doesn't make any difference if you get blown up by an ICBM flying from the Soviet Union or one from 90 miles away," and regretted his earlier ultimatum by stating that, "Last month I should have said we don't care."⁶³

On September 11, Moscow drew its own line in the sand when it warned that "one cannot now attack Cuba and expect the aggressor will be free from punishment. If this attack is made, this will be the beginning of the unleashing of war."⁶⁴

9. During the crisis, Kennedy forgot that the United States had earlier deployed nuclear missiles in Turkey that were comparable to the Soviets' Cuban missiles. On the first day of the crisis, October 16, JFK expressed shock at Khrushchev's recklessness in deploying nuclear missiles so close to our shores. Obviously forgetting that he had deployed similar missiles in Turkey in the Spring of that year, JFK argued, "It's just as if we suddenly began to put a major number of MRBMs in Turkey. Now that'd be goddamn dangerous." Kennedy's National Security Adviser, McGeorge Bundy, had to remind him that the United States had done exactly that. Then, instead of seeing Khrushchev's move in a new light, Kennedy and his advisers used tortured logic to portray the Soviet's Cuban missile deployment as fundamentally different from ours in Turkey, in direct contradiction to what the president had just said.⁶⁵

10. President Eisenhower's 1959 prediction of a disastrous Soviet response to a potential American deployment of nuclear missiles in Turkey were ignored in 1962. In the spring of 1962, American nuclear missiles became operational in Turkey, adding to Khrushchev's

⁶⁰ Richard Ned Lebow and Janice Gross Stein, *We All Lost the Cold War*, p. 345.

⁶¹ United States Senate Report No. 94-465, *ALLEGED ASSASSINATION PLOTS INVOLVING FOREIGN LEADERS: An Interim Report of the Select Committee to Study Governmental Operations with respect to Intelligence Activities*, November 20, 1975, US Government Printing Office, p. 85.

⁶² Laurence Chang and Peter Kornbluh (Editors), *The Cuban Missile Crisis*, p. 367.

⁶³ Timothy Naftali and Philip Zelikow, *The Presidential Recordings, vol. 2*, Norton, New York, 2001, p. 441 and p. 433.

⁶⁴ Richard K. Betts, *Nuclear Blackmail and Nuclear Balance*, The Brookings Institution, Washington, DC, 1987, p. 112.

⁶⁵ Sheldon M. Stern, *The Week the World Stood Still: Inside the Secret Cuban Missile Crisis*, Stanford University Press, Stanford, CA, 2005, p. 50.

motivation to base similar Soviet weapons in Cuba.⁶⁶ A risk of this nature had been foreseen several years earlier by President Eisenhower, when the Turkish deployment was first being considered. Even though Castro was not yet in power, minutes of a 1959 meeting quote Eisenhower as seeing a parallel to a possible Soviet deployment in Cuba:

If Mexico or Cuba had been penetrated by the Communists, and then began getting arms and missiles from [the Soviets], we would be bound to look on such developments with the gravest concern and in fact ... it would be imperative for us [even] to take ... offensive military action.⁶⁷

In spite of recognizing this danger, Eisenhower set in motion events that resulted in our missiles being deployed to Turkey several years later.

11. Critical decisions were often based on domestic political considerations, such as the upcoming midterm elections, rather than national security. Some of President Kennedy's actions during the Cuban missile crisis were motivated more by domestic politics than by national security. Early in the crisis, Secretary of Defense Robert McNamara noted: "I'll be quite frank. I don't think there is a military problem ... This is a domestic, political problem."⁶⁸

While McNamara did not specify the domestic political problem he had in mind, Republicans in Congress had been criticizing JFK over the Soviet presence in Cuba and the Democrats were expected to suffer losses in the upcoming midterm elections. Instead, with Kennedy appearing to have bested Khrushchev, the Democrats maintained strong majorities in both the House and the Senate.

In a later, October 23, 1962, conversation between the president and his brother, Robert Kennedy said, "Well, there isn't any choice. I mean, you would have been, you would have been impeached." To which JFK replied, "That's what I think. I would have been impeached. I think they would've moved to impeach."⁶⁹

While the Kennedy brothers probably were right that less aggressive action by the president would have cost him politically, that is a small price compared to the possible destruction of our nation.

⁶⁶ Fedor Burlatsky, *Khrushchev and the First Russian Spring*, Charles Scribners Sons, New York, 1991, p. 171.

⁶⁷ Barton J. Bernstein, "Reconsidering the Missile Crisis: Dealing with the Problem of the American Jupiters in Turkey," pp. 55-129, in James A. Nathan (Editor), *The Cuban Missile Crisis Revisited*, St. Martin's Press, New York, 1992. The Eisenhower quote is on p. 58.

⁶⁸ Timothy Naftali and Philip Zelikow, *The Presidential Recordings, vol. 2*, Norton, New York, 2001, p. 464; McNamara's quote is in two pieces, with others speaking in between.

⁶⁹ Timothy Naftali and Ernest May, *The Presidential Recordings: John F. Kennedy: The Great Crises, Volume 3*, Norton, New York, 2001, p. 173.

Appendix II: Some other Cold War nuclear risks.

1. April 17-19, 1961: The US attempted to overthrow Castro in the failed Bay of Pigs

invasion. Planning to overthrow Castro's regime started under the Eisenhower administration, was inherited by Kennedy, and came to a head in this failed invasion attempt. It and subsequent US covert actions aimed at regime change in Cuba played a role in Khrushchev's offering, and Castro's accepting, Soviet nuclear weapons to prevent a second invasion attempt. America's feeling of humiliation contributed to public support for a second invasion, but this time with a large enough American force to ensure success. See Appendix I's entry "The United States gave numerous indications that it intended to invade Cuba, causing Castro to tell Khrushchev to launch his missiles preemptively."

2. October 22-28, 1961: The Berlin Crisis led to a Soviet-American tank standoff. West Berlin was a symbol of freedom to the United States and a thorn in the side of Moscow. A 2009 US Army history notes that, in October 1961, "tensions ... nearly escalated to the point of war," with Soviet and American tanks facing off at Checkpoint Charlie.⁷⁰ In addition to other risks associated with this standoff, each of the tank commanders – both Soviet and American – had the ability, though not the authority, to start a fire fight which would have increased the risk of war.

3. November 22, 1963: JFK's assassination caused fear within the CIA of a Soviet attack.

According to a National Security Archive publication: "Fears that Moscow might have masterminded the president's killing rose sharply when the CIA was unable to locate Soviet Premier Nikita Khrushchev for 24-48 hours afterwards." That same publication quotes CIA officials as fearing that Khrushchev might be "either hunkering down for an American reprisal, or possibly preparing to strike the United States."⁷¹

4. June 5-10, 1967: The Mideast Six Day War "damn near" led to war between the United States and the Soviet Union according to Secretary of Defense McNamara.

This war engendered many risks, including an allegation by former Secretary of Defense Robert McNamara that the United States and the Soviet Union "damn near had war" as a result of the Soviets misinterpreting actions by a US aircraft carrier.⁷²

5. October 1969: Nixon's "Madman Nuclear Alert" caused unforeseen dangers. As related by Prof. Scott Sagan and Prof. Jeremi Suri,⁷³ President Nixon ordered a military alert for the

⁷⁰ Dave Melancon, U.S. Army Europe Public Affairs Office, "Tensions ran high at Checkpoint Charlie in 1961 as Easterners fled to West, Berlin Wall went up," November 2, 2009, [accessible online](#).

⁷¹ Jeffrey T. Richelson, "Studies in Intelligence: New Articles from The CIA's In-House Journal," June 4, 2013, updated November 20, 2014, [accessible online](#).

⁷² AP, "McNamara says U.S., Russia close to war in 1967," *Spokane Chronicle*, September 15, 1983, p. 2, [accessible online](#).

⁷³ Scott D. Sagan and Jeremi Suri, "The Madman Nuclear Alert: Secrecy, Signaling, and Safety in October 1969," *International Security*, vol. 27, No. 4, Spring 2003, pp. 150-153, [accessible online](#).

ostensible purpose of responding “to possible confrontation by the Soviet Union.” But, it was a ruse. Nixon’s chief of staff H.R. Haldeman says that Nixon told him:

I call it the Madman Theory, Bob. I want the North Vietnamese to believe that I’ve reached the point that I might do *anything* to stop the war. We’ll just slip the word to them that “for God’s sake, you know Nixon is obsessed about Communism. We can’t restrain him when he is angry — and he has his hand on the nuclear button” — and Ho Chi Minh himself will be in Paris in two days begging for peace.⁷⁴

Despite efforts by Nixon and Kissinger to minimize the chances of an accidental escalation, Sagan and Suri detail a number of dangerous military activities that occurred.

6. October 6-25, 1973: The Mideast Yom Kippur War led to ominous Soviet threats. As with the 1967 Six Day War, there were a number of nuclear risks in 1973. As one example, on October 24, the Israeli army was poised to capture the 22,000-man Egyptian Third Army and its large cache of Soviet military equipment. Soviet General Secretary Leonid Brezhnev sent a letter⁷⁵ to President Nixon suggesting that a joint US-Soviet force be sent to enforce UN Security Council Resolution 338⁷⁶ that called for a cease fire, and that had been supported by both the US and the USSR.

On receipt of Brezhnev’s letter, a National Security Council meeting was immediately called. Probably seeing a joint Soviet-American military effort as infeasible, the meeting focused on Brezhnev’s warning, “that if you find it impossible to act jointly with us in this matter, we should be faced with the necessity urgently to consider the question of taking appropriate steps unilaterally.” In response, US forces were ordered to Defcon III, an action that the Soviets saw as “irresponsible.”⁷⁷

⁷⁴ H.R. Haldeman with Joseph DiMona, *The Ends of Power*, New York, Times Books, 1978, p. 83. Emphasis is in the original.

⁷⁵ “Letter From Soviet General Secretary Brezhnev to President Nixon,” *FOREIGN RELATIONS OF THE UNITED STATES*, 1969–1976, Vol. XV, Soviet Union, June 1972–August 1974, [accessible online](#).

⁷⁶ Victor Israelian, “Nuclear Showdown as Nixon Slept,” [accessible online](#). Israelian was at Pennsylvania State University when he wrote this article, but in 1973 he worked at the Soviet Foreign Ministry and attended the Politburo meeting held in response to the US moving to Defcon III. Israelian states that, “Brezhnev expressed his indignation at the fact that the Americans had prepared their troops for military action. He and his colleagues characterized Nixon's decision as irresponsible.”

⁷⁷ The author of the cited article, Victor Israelian, was at Pennsylvania State University when he wrote it. But in 1973, he worked at the Soviet Foreign Ministry and attended the Politburo meeting held in response to the US moving to Defcon III. Israelian states, “Brezhnev expressed his indignation at the fact that the Americans had prepared their troops for military action. He and his colleagues characterized Nixon's decision as irresponsible.”

This crisis ended the next day when Secretary of State and Presidential National Security Advisor Henry Kissinger successfully applied strong pressure⁷⁸ on Israel not to capture or destroy the Egyptian Third Army.

7. November 9, 1979: A false alarm resulted in a 3 AM call to the president's National Security Advisor. According to former Secretary of Defense Robert Gates:⁷⁹

[President Carter's National Security Advisor Zbigniew] Brzezinski was awakened at three in the morning by [General William] Odom, who told him that some 220 Soviet missiles had been launched against the United States. ... Brzezinski was convinced we had to hit back and told Odom to confirm that the Strategic Air Command was launching its planes. When Odom called back, he reported that he had further confirmation, but that 2,200 missiles had been launched—it was an all-out attack. One minute before Brzezinski intended to telephone the President, Odom called a third time to say that other warning systems were not reporting Soviet launches. Sitting alone in the middle of the night, Brzezinski had not awakened his wife, reckoning that everyone would be dead in half an hour. It had been a false alarm. Someone had mistakenly put military exercise tapes into the computer system.

8. December 25, 1979: The Soviet invasion of Afghanistan heightened tensions. This invasion was seen ominously in the US, with *TIME* columnist Strobe Talbott referring to it as “the Soviet army’s blitz against Afghanistan,” and warning that “the Soviet jackboot was now firmly planted on a stepping stone to possible control over much of the world’s oil supplies.”⁸⁰

The day after the invasion, President Carter's National Security Advisor Zbigniew Brzezinski stated in a memo to the president: “the Soviet intervention in Afghanistan poses for us an extremely grave challenge.”⁸¹

The British Ambassador to Moscow from 1988-1992, Sir Roderic Braithwaite, saw the invasion very differently and wrote:

⁷⁸ David Walsh, “Timeless Lessons from the October 1973 Arab-Israeli War,” Modern War Institute at West Point, October 4, 2017, [accessible online](#).

⁷⁹ Robert M. Gates, *From the Shadows: The Ultimate Insider's Story of Five Presidents and How they Won the Cold War*, New York, Simon & Schuster, 1996, p.114. The National Security Archive has [an online account](#) of the incident.

⁸⁰ Strobe Talbott, “Nation: Back to Maps and Raw Power,” *TIME*, January 21, 1980, [accessible online](#). Talbott later served President Bill Clinton as Deputy Secretary of State. Talbott's appraisal is disputed by Lieutenant General (US Army, Retired) Karl Eikenberry, Commander of the American-led Coalition forces in Afghanistan from 2005 to 2007 and our Ambassador to that country from 2009 to 2011. In a private communication Eikenberry told me, “Given the geographic constraints and geopolitical realities, it is not at all clear why Talbott thought this was so.”

⁸¹ Brzezinski memo to Carter “Reflections on Soviet Intervention in Afghanistan,” December 26, 1979. This memo is included in a [large collection](#) of documents, which fortunately appear to be in chronological order.

The Russians did not invade Afghanistan in order to incorporate it into the Soviet Union, or to use it as a base to threaten the West's oil supplies in the Gulf, or to build a warm water port on the Indian Ocean. They went in to sort out a small, fractured and murderous clique of Afghan Communists who had overthrown the previous government in a bloody coup and provoked chaos and widespread armed resistance on the Soviet Union's vulnerable Southern border.⁸²

Whoever is right, and there may well be some truth in both perspectives, the Soviet invasion produced a crisis. President Carter embargoed US shipments of grain to the Soviet Union and boycotted the 1980 Moscow Summer Olympics. Some of the rebels whom the United States aided added risk by crossing from Afghanistan *into the Soviet Union* to carry out acts of sabotage and propagandize the local Muslim population.⁸³

The Soviet invasion and our response to it helped lay the foundation for 9/11 and the ongoing war in Afghanistan since many of the Afghan *mujahideen*, including Osama bin Ladin, later turned against the West. Thus the nuclear risk attributable to 9/11 and subsequent events is traceable in part to these much earlier events.

Pakistan's nuclear arsenal is another risk that can be traced in part to the Soviet invasion of Afghanistan. Brzezinski's memo cited above went on to say (emphasis added; see page 3, item B, of the memo), "we must both reassure Pakistan and encourage it to help the rebels. This will require a review of our policy toward Pakistan, more guarantees to it, more arms aid, and, alas, *a decision that our security policy toward Pakistan cannot be dictated by our nonproliferation policy.*"

9. June 20, 1983: US Proud Prophet war game escalated uncontrollably resulting in hundreds of millions killed. The outcome of war games is usually classified, so it was unusual — and helpful in assessing risk — when Prof. Paul Bracken was able to detail the results of this 1983 war game in which he was involved:⁸⁴

This wasn't any ordinary war game. ... Proud Prophet [used] actual decision makers, the secretary of defense and the chairman of the Joint Chiefs of Staff. To make it as realistic as possible, actual top-secret U.S. war plans were incorporated into the game. ...

American limited nuclear strikes were used in the game. The idea behind these was that once the Soviet leaders saw that the West would go nuclear they would come to their senses and accept a cease-fire. ... But that's not what happened. The Soviet

⁸² Rodric Braithwaite, "The Soviet Withdrawal from Afghanistan Didn't Sort Out the Country—Will Ours?", George Washington University, History News Network, June 11, 2011, [accessible online](#).

⁸³ Steve Coll, *Ghost Wars: The Secret History of the CIA, Afghanistan, and Bin Laden, from the Soviet Invasion to September 10, 2001*, Penguin, New York, 2004, p. 90.

⁸⁴ Paul Bracken, *The Second Nuclear Age: Strategy, Danger, and the New Power Politics*, Times Books, New York, 2012, pp. 82-88.

Union ... responded with an enormous nuclear salvo at the United States. The United States retaliated in kind. ...

A half billion human beings were killed in the initial exchanges and at least that many more would have died from radiation and starvation. ... This game went nuclear big time, not because Secretary Weinberger and the chairman of the Joint Chiefs were crazy but because they faithfully implemented the prevailing U.S. strategy, a strategy that few had seriously thought about outside of the confines of a tight little circle of specialists. I have played other games that erupted, and they shared this common feature, too. A small, insulated group of people, convinced that they are right, plows ahead into a crisis they haven't anticipated or thought about, one that they are completely unprepared to handle. The result is disaster.

Some later war games ended similarly as detailed in Appendix III's entries "2004, war games escalate uncontrollably" and "2018, US war games again escalate uncontrollably."

10. September 1, 1983: South Korean airliner KAL 007 was shot down by the Soviets, killing 269 including a US Congressman. Korean Air Lines flight 007 was shot down by a Soviet SU-15 interceptor over Sakhalin Island, killing all 269 aboard, including Georgia Congressman Lawrence McDonald. The airliner went off course and strayed into Soviet airspace over the Kamchatka Peninsula, where a Soviet missile test was scheduled for that day. The plane left Soviet airspace, but re-entered a second time over Sakhalin Island, where it was shot down. President Reagan characterized this tragedy as a "crime against humanity [that] must never be forgotten ... It was an act of barbarism, born of a society which wantonly disregards individual rights and the value of human life and seeks constantly to expand and dominate other nations."⁸⁵

As can be seen from the above quote, this tragedy occurred during a time of heightened tensions between the US and the USSR, and it created additional risk.

Five years later, on July 3, 1988, the USS *Vincennes* shot down Iran Air 655, killing all 290 people on board. The next day, when President Reagan was asked about a possible comparison between that tragedy and KAL 007, he replied that, "there was a great difference. ... There's no comparison."⁸⁶ Later evidence shows that the president was relying on incorrect

⁸⁵ Ronald Reagan, "Address to the Nation on the Soviet Attack on a Korean Civilian Airliner," Ronald Reagan Presidential Library & Museum, September 5, 1983, [accessible online](#).

⁸⁶ Federal News Service Archives, "QUESTIONS AND ANSWERS WITH PRESIDENT REAGAN REGARDING: USS VINCENNES SHOOTING DOWN OF IRANIAN AIRCRAFT WHITE HOUSE SOUTH LAWN 12:00 P.M. EDT MONDAY, JULY 4, 1988." The full text of Reagan's answer is only accessible through the Federal News Service, but [a 7/5/1988 Washington Post article](#) has some of President Reagan's answer.

information.⁸⁷ Analysis therefore might uncover additional risks that were present in the KAL 007 tragedy due to misperceptions.

11. November 1983: NATO's Able Archer exercise was seen as "one of the potentially most dangerous episodes of the Cold War" by former Secretary of Defense Robert Gates.

I include this incident even though there is disagreement surrounding the level of risk that it entailed.⁸⁸ In fact, I felt it important to include *because of* those disagreements, so that any readers who are familiar with only one perspective will become aware of the other as well.

On the one hand, former Secretary of Defense Robert Gates has characterized Able Archer as "one of the potentially most dangerous episodes of the Cold War."⁸⁹ On the other hand, the above-linked article cites Harvard Prof. Mark Kramer as dismissing such assertions as "a mere myth."

Whichever side is right, and again there may well be elements of truth in both perspectives, relations between the superpowers were very poor during the early 1980s, producing a heightened risk of war. Able Archer occurred just two months after KAL 007 had been shot down and less than eight months after President Ronald Reagan's "Star Wars" speech that greatly alarmed the Soviets.

Gates wrote that Soviet leader Yuri Andropov developed a "seeming fixation on the possibility that the United States was planning a nuclear strike against the Soviet Union" and "that such a strike could occur at any time, for example, under cover of an apparently routine military exercise."⁹⁰ Able Archer was just such an exercise, simulating the coordinated release of all of NATO's nuclear weapons.

⁸⁷ As one example of incorrect information on which President Reagan relied, [he said](#): "the plane [Iran Air 655] began lowering its altitude. And so I think it was an understandable accident to shoot and think that they were under attack from that plane." While initial reports from the *Vincennes* incorrectly stated that Iran Air 655 was descending, in an August 19, 1988 press briefing, the Chairman of the Joint Chiefs of Staff, Admiral William J. Crowe, corrected that error: "One of the [*Vincennes*] radar operators reported at 11 miles that the aircraft [Iran Air 655] was no longer climbing and that the altitude had commenced to decrease, a report that was not supported by a subsequent review of the Aegis tapes." Admiral Crowe's statement is [accessible online](#) as document 259 on p. 458 of a large collection.

⁸⁸ Martin Deuerlein, "Challenges, Concepts, Ideas during the Cold War of the 1970s and 1980s," H-Net Reviews in the Humanities & Social Sciences, April 2014, [accessible online](#).

⁸⁹ Robert M. Gates, *From the Shadows: The Ultimate Insider's Story Of Five Presidents And How They Won The Cold War*, Simon & Schuster Paperback, New York, 1996, pp. 270-272.

⁹⁰ Robert M. Gates, *ibid*

Appendix III: Some post-Cold War nuclear risks.

By enumerating a number of post-Cold War nuclear risks, this appendix raises questions about the belief that the nuclear threat ended with the fall of the Berlin Wall. Many of these events occurred during the 1990's, a decade that is usually thought of as having very little nuclear risk.

1. 1991 Soviet coup attempt produces chaos and nuclear risk. In August 1991, a coup attempt was mounted against Soviet President Mikhail Gorbachev. While the coup failed, the chaos and uncertainty surrounding control of the Soviet nuclear arsenal increased nuclear risk.⁹¹

2. 1993 Russian Constitutional Crisis leads to shelling of its Parliament building. This was a small civil war between parties loyal to Yeltsin and others loyal to the Russian parliament. The Russian Parliament Building was shelled and there were over 600 casualties, including 187 dead. The first 20 seconds of a Radio Free Europe/Radio Liberty video⁹² graphically depicts the chaos.

3. 1994-present, North Korean nuclear crisis almost leads to war several times. North Korea and the US came close to fighting a second Korean War in June 1994, over the North's nuclear program.⁹³ Intervention by former President Jimmy Carter resulted in the 1994 Agreed Framework⁹⁴ that averted war and was in place until 2002. North Korea did its first nuclear test four years later in 2006 and, in 2021, was estimated to have produced enough fissile material to build 40 to 50 nuclear weapons, "and that it might possibly have assembled 10 to 20 warheads for delivery by medium-range ballistic missiles."⁹⁵

Relations have been extremely tense in recent years, including White House pressure early in 2018 to develop plans for attacking a North Korean missile on its launchpad.⁹⁶ Should the US and North Korea go to war, there is some risk of losing one or more American cities, either by a

⁹¹ Patrick E. Tyler, "Troubling Question: Whose Finger Was on Nuclear Trigger?", *New York Times*, August 24, 1991, p. A9, [accessible online](#).

⁹² Kristyna Foltynova, "The Day The Russian White House Was Shelled," Radio Free Europe/Radio Liberty, October 4, 2019, [accessible online](#).

⁹³ Leon V. Sigal, "The North Korean Nuclear Crisis: Understanding The Failure of the 'Crime-and-Punishment' Strategy," Arms Control Association, May 1997, [accessible online](#).

⁹⁴ "Agreed Framework Between the United States of America and the Democratic People's Republic of Korea," October 21, 1994, [accessible online](#). That link is to a transcribed State Department version of the Agreed Framework. It is accurate except for one insignificant typo that I found when I compared it to a copy of the original, signed agreement in the Hoover Institution's archives. At one point the State Department's version says, "The U.S. and D.P.R.K. **will cooperated** in finding a method ..." whereas the original documented read, "The U.S. and D.P.R.K. **will cooperate** in finding a method ..."

⁹⁵ Hans. M. Kristensen and Matt Korda, "North Korean nuclear weapons, 2021," *Bulletin of the Atomic Scientists*, vol. 77, No. 4, July 21, 2021, [accessible online](#).

⁹⁶ Mark Landler and Helene Cooper, "Split Grows Over Alternatives For Strike Against North Korea," *New York Times*, February 1, 2018, p. A1, [accessible online](#).

missile attack or a smuggled weapon. If China became involved in the war, the risk would increase markedly.

4. 1995-1996, Third Taiwan Straits Crisis creates the possibility of a war with China.

Taiwan's declaring its independence would be so intolerable to the People's Republic of China that it could precipitate a war that might drag in the United States. In 1995, over the strenuous objections of the PRC, Taiwan's pro-independence president, Lee Teng-hui, was granted a visa to visit the United States. The PRC was incensed and conducted missile tests to express its anger and, "The possibility of a shooting war between the United States and the People's Republic of China was suddenly made real to Bill Clinton in early March 1996."⁹⁷

This crisis has repercussions down to the current day. China's current, aggressive stance is partly a response to the humiliation that it felt when Clinton, in a show of military force, sent two aircraft carrier battle groups to the area in March 1996.⁹⁸

The Taiwanese independence movement is still active⁹⁹ and in a 2018 statement Lieutenant General Ben Hodges (US Army, Retired) thinks that "in 15 years — it's not inevitable, but it is a very strong likelihood — that we will be at war with China."¹⁰⁰

5. 1999-present, NATO expansion heightens Russian-American tensions. Prior to the breakup of the Soviet Union, Russia had a large buffer between it and NATO — a buffer that it felt it needed in light of Hitler's devastating 1941 invasion. That buffer shrank considerably in 1999 when Poland, Hungary, and the Czech Republic were admitted to NATO, and disappeared in 2004 when Estonia, Lithuania, and Latvia became members.

Russia feels not only threatened, but also cheated because, in a February 9, 1990 meeting, Soviet President Mikhail Gorbachev was told¹⁰¹ by US Secretary of State James Baker that, if the Soviet Union allowed the reunification of Germany within NATO, "there would be no extension of NATO's jurisdiction for forces of NATO one inch to the east."¹⁰² There is a dispute whether this was an assurance or a prediction, and whether it applied given later events.] Even though this was not a legally binding guarantee and Gorbachev later took actions that raised

⁹⁷ Patrick Tyler, *A Great Wall: Six Presidents and China: An Investigative History*, Public Affairs, New York, 1999, p. 21, [accessible online](#).

⁹⁸ J. Michael Cole, "The Third Taiwan Strait Crisis: The Forgotten Showdown Between China and America," *The National Interest*, March 10, 2017, [accessible online](#).

⁹⁹ J. Michael Cole, "Now Is Not the Time for a Referendum on Taiwanese Independence," *The National Interest*, February 19, 2019, [accessible online](#)

¹⁰⁰ Vanessa Gera, The Associated Press, "US war with China is likely in 15 years, retired general says," *Military Times*, October 24, 2018, [accessible online](#).

¹⁰¹ U.S. Department of State, FOIA 199504567 (National Security Archive Flashpoints Collection, Box 38), [accessible online](#).

¹⁰² United States Department of State, "Memorandum of conversation between Mikhail Gorbachev and James Baker in Moscow," February 9, 1990, [accessible online](#). This quote appears on page 6's second paragraph.

questions about whether Baker's assurance still applied,¹⁰³ Russia feels cheated, thereby creating nuclear risk.

A 2019 Radio Free Europe/Radio Liberty dispatch quoted NATO Secretary-General Jens Stoltenberg as saying that it was "clearly stated that Georgia will become a member of NATO,"¹⁰⁴ even though that article describes "the Kremlin's fierce opposition" to such a move.

6. 1999 Pristina Airport crisis causes a British 3-star to tell an American 4-star, "Sir, I'm not starting World War III for you." In June 1999, as NATO peacekeeping troops moved into Kosovo, American General Wesley Clark ordered British Lieutenant General Sir Mike Jackson to take actions that Jackson feared could lead to combat between NATO and Russian troops at the Pristina Airport. Clark's and Jackson's accounts agree that a heated argument ended with Jackson telling Clark, "Sir, I'm not starting World War III for you."¹⁰⁵

Clark states that he gave that order to Jackson because, "I didn't want to face the issue of shooting down Russian transport aircraft if they forced their way through NATO airspace. ... [and] I expected that when NATO met the Russians with determination and a show of strength, the Russians would back down."¹⁰⁶ Clark was probably right about the Russians backing down, but to assess the risk we would have to quantify *probably*, and then analyze what might happen if the Russians' response differed from the one Clark expected.

7. 2004, US war games escalate uncontrollably. Echoing Appendix II's entry about the 1983 Proud Prophet war game escalating uncontrollably, a 2008 RAND Project Air Force report noted that:

In 2004, Director of Air Force Strategic Planning Major General Ronald J. Bath sponsored a war game in which uncontrolled escalation occurred, surprising players and controllers alike. ... this experience was just one in a series of escalatory events occurring in major war games over the past several years.¹⁰⁷

See also this appendix's entry "2018, US war games again escalate uncontrollably."

¹⁰³ Mary Elise Sarotte, "Enlarging NATO, Expanding Confusion," *New York Times*, November 29, 2009, p. A31, [accessible online](#).

¹⁰⁴ Radio Free Europe/Radio Liberty Georgian Service, "Stoltenberg: Georgia Will Join NATO, And Russia Can Do Nothing About It," March 25, 2019, [accessible online](#).

¹⁰⁵ General Wesley K. Clark, *Waging Modern War*, Public Affairs, New York, 2001, p. 394; and General Sir Mike Jackson, *Soldier: The Autobiography*, Bantam Press, London, 2007, p. 272.

¹⁰⁶ General Wesley K. Clark, *ibid*, p. 395.

¹⁰⁷ Forrest E. Morgan, Karl P. Mueller, Evan S. Medeiros, Kevin L. Pollpeter, and Roger Cliff, *Dangerous Thresholds: Managing Escalation in the 21st Century*, RAND Project Air Force, Santa Monica, 2008, [accessible online](#).

8. 2008 Cuban bomber mini-crisis almost becomes a full-blown crisis. In July 2008, elements within the Russian military threatened to deploy nuclear-capable bombers to Cuba.¹⁰⁸ This threat was in response to the US planning an Eastern European missile defense system that Russia felt threatened its nuclear deterrent.¹⁰⁹

In his confirmation hearings as USAF Chief of Staff, General Norton Schwartz testified that this would cross a red line.¹¹⁰ Fortunately, more sober-headed elements in Russia prevailed and the threat did not materialize. If the Russians had based nuclear-capable bombers on Cuba, a crisis comparable to 1962's might have resulted.

9. 2008 Georgian War: In August 2008, Russia invaded Georgia after the latter tried to reclaim its breakaway region of South Ossetia, resulting in attacks on a Russian peacekeeping force.¹¹¹ The danger was compounded because most Americans were unaware that an EU investigation concluded that Georgia fired the first shots, "which was followed by a disproportionate response of Russia."¹¹² Reflecting the mood of many Americans at the time, Vice Presidential candidate Sarah Palin said that the United States should be ready to go to war with Russia if the conflict flared up again.¹¹³

10. 2012-present, Senkaku-Diaoyu Islands dispute results in aerial and naval games of chicken: An ongoing dispute between Japan and China over the Senkaku-Diaoyu Islands heated up in 2012 when the governor of Tokyo took actions that provoked China.¹¹⁴ According to a 2015 *New York Times* article, "At least once every day, Japanese F-15 fighter jets roar down the runway, scrambling to intercept foreign aircraft, mostly from China,"¹¹⁵ and the risk continues down to the current day.¹¹⁶

¹⁰⁸ Peter Finn, "Russian Bombers Could Be Deployed to Cuba: Move Would Be Response to U.S. Missile Defense System, Newspaper Izvestia Says," *Washington Post*, July 22, 2008, p. A10, [accessible online](#).

¹⁰⁹ CNN, "U.S.-Czech missile deal raises Russian ire," July 8, 2008, [accessible online](#).

¹¹⁰ Nominations Before the Senate Armed Services Committee, Second Session, 110th Congress, p. 365.

¹¹¹ [Volume I](#) of the EU investigation's report states: "At least as far as the initial phase of the conflict is concerned, an additional legal question is whether the Georgian use of force against Russian peacekeeping forces on Georgian territory, i.e. in South Ossetia, might have been justified. Again the answer is in the negative."

¹¹² Heidi Tagliavini, "Lessons of the Georgia Conflict," *The International Herald Tribune*, October 1, 2009, [accessible online](#). Tagliavini led the E.U. investigation into the 2008 conflict between Russia and Georgia.

¹¹³ Charlie Gibson, "Interview of Sarah Palin," ABC News, September 11, 2008, [accessible online](#).

¹¹⁴ Koyoshi Takenaka, "Japan buys disputed islands, China sends patrol ships," Reuters, September 11, 2012, [accessible online](#).

¹¹⁵ Martin Fackler, "In a Test of Wills, Japanese Fighter Pilots Confront Chinese," *New York Times*, March 9, 2015, p. A4, [accessible online](#).

¹¹⁶ Olivia Liao, "Long-Simmering Tensions Flare Over Disputed Senkaku Islands in East China Sea," *Voice of America/China News*, July 8, 2022, [accessible online](#).

This dispute puts the ability to start a fire fight in the hands of individual pilots and ship captains who often engage in aerial and naval games of chicken. Should war break out between China and Japan, the 1960 US-Japan Security Treaty commits us to come to Japan's aid. The general risk of allies taking actions that could result in nuclear war will be discussed in Appendix V.

11. 2014-September 24, 2022, Ukrainian crisis smolders. The Ukrainian crisis coupled with Russia's conventional inferiority led Vladimir Putin to make nuclear threats soon after the events of February 2014. The risk has become even more serious since Russia's February 24, 2022, invasion of Ukraine, leading President Biden to warn on October 6 that the world may be facing "the prospect of Armageddon."¹¹⁷

12. 2015, Turks shoot down a Russian jet: The ongoing Syrian civil war could have produced a major crisis in November 2015, when Turkish F-16's shot down a Russian SU-24 near Turkey's border with Syria,¹¹⁸ and Turkmen Syrian rebels killed the pilot. If Russia had retaliated against Turkey, which fortunately it did not, Turkey could have cited the United States' NATO commitment to treat an attack on them the same as if we had been attacked. As with the above-described Senkaku-Diaoyu dispute, this is an example of a general risk that will be discussed in Appendix V.

This event would be even more dangerous if allegations prove true that the Turks ambushed the Russian jet. Pierre Sprey, a longtime defense analyst and a member of the team that developed the F-16, stated that "the evidence looks pretty strong that the Turks were setting up an ambush."¹¹⁹

13. 2018, US war games escalate uncontrollably, ending in global nuclear war. At a July 2018 conference, USAF General John Hyten, then STRATCOM's Commander, described a war game that ended "bad." He clarified that, "bad meaning it ends with global nuclear war."¹²⁰ This bears a dangerous resemblance to earlier war games escalating out of control as detailed in Appendix II's entry "June 20, 1983, Proud Prophet war game escalates uncontrollably" and this appendix's "2004, war games escalate uncontrollably."

14. February 24, 2022, Russia invades Ukraine. This risk is treated in section 4 of this report.

¹¹⁷ David E. Sanger, "Warning of Armageddon, and Seeking an Out for Putin," *New York Times*, October 8, 2022, p. A10, [accessible online](#).

¹¹⁸ Neil MacFarquhar and Steven Erlanger, "Turkey Brings Down Russia Warplane on Syrian Mission," *New York Times*, November 25, 2015, p. A1, [accessible online](#).

¹¹⁹ Andrew Cockburn, "Interview with Pierre Sprey," *Harper's Magazine*, December 4, 2015, [accessible online](#).

¹²⁰ General John E. Hyten, "Speech to STRATCOM's Mitchell Institute Triad Conference," July 17, 2018, [accessible online](#).

Appendix IV: Some American actions that helped keep the Cold War alive.

The US and Russia have both helped keep the Cold War alive. However, in this Appendix I list only American actions since those are the ones over which we have direct control. If we had not done things like this, there is no guarantee that we could have avoided confrontation with Russia and the current war in Ukraine. But little to nothing would have been lost by behaving differently, especially with respect to the first two items below. And we just might have avoided the current, horrific war in Ukraine if we had followed Michael McFaul's 2001 advice and truly ended the Cold War.

1. Most Americans believe that we won the Cold War, whereas the situation was more complex. As Mikhail Gorbachev related in a 2009 interview, “journalists, politicians and historians in your country concluded that the United States won the cold war, but that is a mistake.”¹²¹ He goes on to note that events that are usually thought of as the end of the Cold War could not have happened without both the new Soviet leadership and President Reagan's changed approach to what he had earlier called an “evil empire” that was “the focus of evil in the modern world.”¹²²

The idea that the US did not “win” the Cold War is echoed by many including the US Ambassador to Moscow when that conflict abated. In a March 2014 OpEd, Ambassador Jack Matlock noted:

... a failure to appreciate how the Cold War ended has had a profound impact on Russian and Western attitudes — and helps explain what we are seeing now [the low intensity war in Ukraine that followed the February 2014 Maidan protests]. The common assumption that the West forced the collapse of the Soviet Union and thus won the Cold War is wrong. The fact is that the Cold War ended by negotiation to the advantage of both sides.¹²³

In that OpEd, Matlock also notes President George H.W. Bush's provocative statement in his 1992 State of the Union address that, “By the grace of God, America won the Cold War.” In contrast a book by Ned Lebow and Janice Stein is titled, *We All Lost the Cold War*.

2. Russia feels treated like a small child by the US. The following excerpt from former Deputy Secretary of State Strobe Talbott's memoirs provides an unintended window on that perspective when he describes a 1993 meeting with Russian Foreign Minister Andrei Kozyrev:

I had prepared for the encounter by writing out in advance a detailed argument on how it was in Russia's own interest to join us in threatening military retribution against the Serbs since that was the only way to stop their onslaught and prevent a full-scale war in the region. Halfway through my presentation, Kozyrev, with a look of exasperation, cut me off.

¹²¹ Katrina vanden Heuvel and Stephen F. Cohen, “Interview with former Soviet President Mikhail Gorbachev, *The Nation*, October 28, 2009, [accessible online](#).

¹²² Ronald Reagan, “Remarks at the Annual Convention of the National Association of Evangelicals in Orlando, Florida,” March 8, 1983, [accessible online](#).

¹²³ Jack F. Matlock, Jr., “Who is the bully? The U.S. has treated Russia like a loser since the end of the Cold War,” *Washington Post*, March 14, 2014, [accessible online](#).

“You know,” he said, “it’s bad enough having you people tell us what you’re going to do whether we like it or not. Don’t add insult to injury by also telling us that it’s in our interests to obey your orders.”

Afterward, in the car riding back to the U.S. Embassy, my assistant Toria Nuland [Victoria Nuland, now one of Biden’s top advisors on Eastern Europe and Russia] could tell I was rattled. “That’s what happens when you try to get the Russians to eat their spinach,” she said. “The more you tell them it’s good for them, the more they gag.”

Among those of us working on Russia policy, “administering the spinach treatment” became shorthand for one of our principal activities in the years that followed.¹²⁴

This attitude grated on Russia, with Mikhail Gorbachev proclaiming, “there is just one thing that Russia will not accept. It will not accept the position of a kid brother, the position of a person who does what someone tells it to do.”¹²⁵

Russia’s annoyance was exacerbated in 1998 by Secretary of State Madeleine Albright saying in an NBC-TV interview that, “if we have to use force, it is because we are America; we are the indispensable nation. We stand tall and we see further than other countries into the future, and we see the danger here to all of us.”¹²⁶

3. Russia feels threatened by NATO expansion, leading to a debate in the West on the wisdom of NATO expansion into Eastern Europe. In 1998, Deputy Secretary of State Strobe Talbott argued for expansion by stating that, “many Russians are, I believe, beginning to acknowledge that there is a new NATO. Far from being directed against Russia, it is committed to working with Russia.”¹²⁷ In contrast, George Kennan, the architect of America’s strategy of containment of the Soviet Union, saw NATO expansion as “the beginning of a new cold war.”¹²⁸ Talbott’s arguments prevailed in the Clinton White House and in 1999 NATO admitted the Czech Republic, Hungary, and Poland.

President George W. Bush further expanded NATO right up to Russia’s borders and, in April 2008, pushed for the admission of Georgia and Ukraine, even though such a move was opposed by France and Germany.¹²⁹ A compromise statement was issued that promised

¹²⁴ Strobe Talbott, *The Russia Hand: Memoirs of a Presidential Diplomat*, Random House Paperback, New York, 2003, p. 76.

¹²⁵ Nicholas Tatsis, “A Brave New World? President Mikhail Gorbachev on the nuclear age and Russia’s future,” *Harvard Political Review*, 2007, [accessible online](#) (search on *Tatsis*).

¹²⁶ U.S. Department of State, “Secretary of State Madeleine K. Albright, Interview on NBC-TV “The Today Show” with Matt Lauer, Columbus, Ohio, February 19, 1998,” [accessible online](#).

¹²⁷ Strobe Talbott, “NATO Expansion,” *Slate*, February 19, 1998, [accessible online](#).

¹²⁸ Thomas L. Friedman, “Foreign Affairs; Now a Word From X,” *New York Times*, May 2, 1998, p. A15, [accessible online](#).

¹²⁹ Steven Erlanger and Steven Lee Myers, “NATO Allies Oppose Bush on Georgia and Ukraine,” *New York Times*, April 3, 2008, [accessible online](#).

Georgia and Ukraine eventual membership, but at an unspecified date, while noting that both countries had “to address the questions still outstanding” before that could happen.¹³⁰

While Georgia and Ukraine were not put on a path to NATO membership, Russia was deeply concerned and Georgia encouraged. Both of those emotions almost surely played a role in the Georgian War that erupted four months later in August 2008.

In the US that war is often seen as caused by a Russian invasion, end of story. In reality, the situation was more complex.

Swiss diplomat Heidi Tagliavini, who led the EU’s investigation of that war, concluded that the immediate cause of the war was “shelling by Georgian forces of the capital of the secessionist province of South Ossetia ... followed by a disproportionate response of Russia.”¹³¹

Emboldened by the promise of eventual NATO membership and probably expecting US support in the war, Georgia shelled Tskhinvali and Russia used that provocation to invade Georgia.

The conflict between Georgia and South Ossetia has a long history with a report from the European Union noting:

During the period of transition to post-Soviet sovereignty the country’s first President, Zviad Gamsakhurdia, then did a lot in terms of nationalism to alienate the two smaller political-territorial entities of Abkhazia and South Ossetia from the Georgian independence project, proclaiming ethno-centrist slogans such as “Georgia for Georgians.”¹³²

¹³⁰ “NATO decisions on open-door policy,” North Atlantic Treaty Organization News, April 3, 2008, [accessible online](#).

¹³¹ Heidi Tagliavini, “Lessons of the Georgia Conflict,” *The International Herald Tribune*, October 1, 2009, [accessible online](#). Tagliavini led the E.U. investigation into the 2008 conflict between Russia and Georgia.

¹³² European Union, Report of the Independent International Fact-Finding Mission on the Conflict in Georgia, September 2009, [accessible online](#).