

STS 152: Nuclear Weapons, Risk and Hope

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Reading

Read this handout and Bruce Blair's columns "Keeping Presidents in the Nuclear Dark" [Episode 1](#) and [Episode 2](#). Blair is a former Minuteman launch control officer who now heads the [World Security Institute](#).

How likely is a full-scale nuclear war?

This section focuses primarily on an all-out nuclear exchange because it is the least respected, yet potentially most destructive, nuclear risk. Because this nuclear risk is the hardest one for many people to envision, it helps to keep in mind that the initial steps to counter this risk and nuclear terrorism are largely the same:

1. Reduce the number of weapons: That reduces the risk of theft by terrorists. It also increases international trust and understanding, an important element in preventing misunderstandings that can lead to crises that, in turn, can lead to war.
2. Raise nuclear awareness: That is a prerequisite to achieving item #1 above.
3. Perform an objective, in-depth analysis of the risk posed by nuclear weapons through terrorism, proliferation and war. Such a study would also investigate coupling between these risks. For example, could a nuclear terrorist attack trigger a nuclear war?

One of the reasons full-scale nuclear war is discounted by most people is illustrated in Figure 1 below (repeated from handout #2).

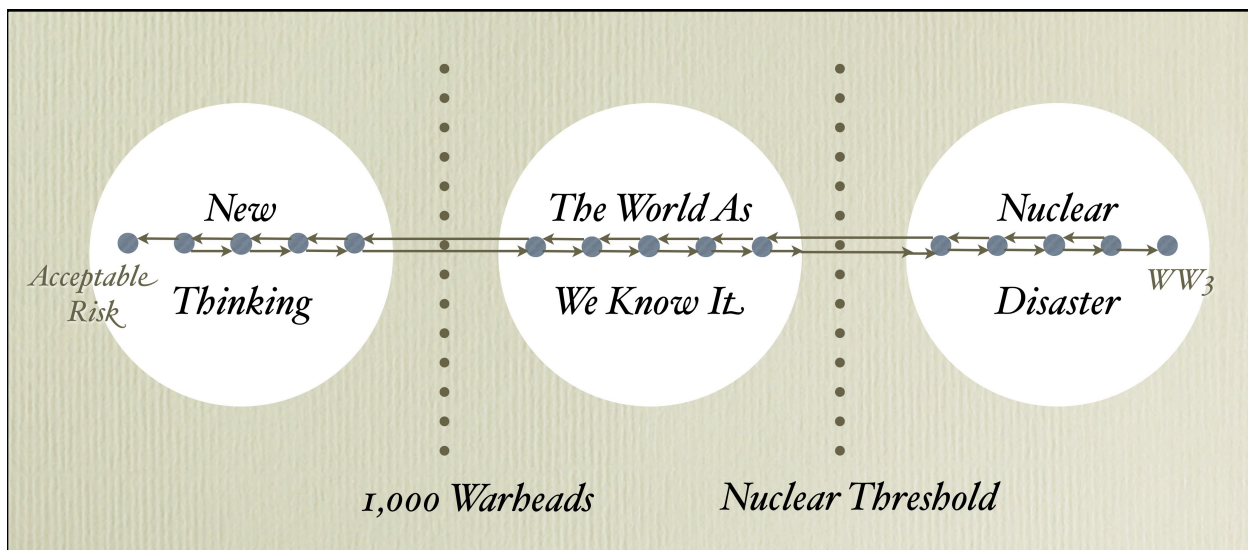


Figure 1. A state diagram illuminates the negative and positive possibilities.

Most of the time, the world is in one of the middle states of the *The World As We Know It* super-state, and there is no direct path to the catastrophic *WW3* state. This leads many people to assume that World War III can never happen. That would be true if we never moved to a state closer to the nuclear threshold, but history shows such excursions occur frequently enough to create an unacceptable risk. Examples include:

- In 1908 a small asteroid struck a remote area of Siberia with the power of a 10 megaton nuclear blast. Today, a similar event in a more populated area could be mistaken for an attack and trigger a nuclear war.
- During the 1961 Berlin crisis American and Soviet tanks faced off at Checkpoint Charlie, in a confrontation that the [U.S. Army web site](#) says “nearly escalated to the point of war.” [Declassified documents](#) show that President Kennedy and his military advisors considered executing a nuclear first strike against the Soviet Union during that crisis.
- President Kennedy estimated the odds of war¹ resulting from the 1962 Cuban Missile Crisis as “somewhere between one out of three and even.” While Kennedy’s estimate may have been inflated by his subjective experience and interests, it also had an underestimation bias because he was unaware of two significant risk factors that did not become known until decades later: A Soviet submarine that we forced to surface had a [nuclear torpedo](#) and considered using it against the American naval force; and the Soviet troops on Cuba had [battlefield nuclear weapons](#) to deter an American invasion – an option frequently advocated throughout the crisis.
- The 1967 Arab-Israeli war led Soviet Party Chairman Alexei Kosygin to [awaken President Johnson](#) with the proverbial 3 AM call² warning that war with the United States was imminent. As noted in that link, Johnson’s Defense Secretary Robert McNamara attributed Kosygin’s call to a misunderstanding.
- In 1973, when Israel encircled the Egyptian Third Army, the Soviets threatened to intervene, leading to implied nuclear threats.³
- In 1979, a test tape that simulated a massive Russian attack was mistakenly fed into a NORAD computer connected to the operational missile alert system, resulting in a serious [false alarm](#). As noted in that link, Senator Charles Percy happened to be at NORAD during that time and described a situation of absolute panic.

¹ Theodore C. Sorensen, *Kennedy*, Harper & Row, New York, 1965, page 705.

² While this “3 AM” call was actually at 7 AM, President Johnson was still groggy when awakened.

³ William L. Ury, *Beyond the Hotline: How We Can Prevent the Crisis that Might Bring on a Nuclear War*, Houghton Mifflin Company, Boston, 1985, pp. 19-20.

- The 1983 Able Archer incident has been described by Secretary of Defense Robert Gates⁴ as “one of the potentially most dangerous episodes of the Cold War.” President Reagan’s statements about fighting and winning a nuclear war had created fear in the Soviet leadership that the U.S. thought it could execute a successful first strike. Able Archer was a NATO military exercise that raised the Soviet fear level to unprecedented levels. If nuclear war seems inevitable, military doctrine would dictate that they strike first – and mistakenly in this case. Both of Bruce Blair’s columns in the assigned reading above provide evidence of that bias.
- Certain events during the 1993 Russian coup attempt that were not recognized by the general public led a number of American intelligence officers at NORAD headquarters to call their families and tell them to leave Washington out of fear that the Russians might launch a nuclear attack.⁵
- In 1995, the Russian air defense system mistook a meteorological rocket launched from Norway for an American submarine launched ballistic missile, causing the Russian “nuclear football” – which contains the codes for authorizing a nuclear attack – to be opened in front of Boris Yeltsin. This was the first time such an event had occurred, and fortunately Yeltsin was sober enough to make the right decision.⁶
- [Confusion and panic](#) during the 9/11 attacks led an airborne F-16 pilot to mistakenly believe we were under attack by the Russians, instead of terrorists. In a dangerous coincidence, the Russian Air Force had scheduled an exercise that day, in which strategic bombers were to be flown toward the United States. Fortunately, the Russians learned of the terrorist attack in time to ground their bombers.
- The August 2008 Russian invasion of Georgia would have produced a serious Russian-American confrontation if President Bush had followed through on his [earlier promises](#) to Georgia. The danger is compounded because most Americans are unaware that Georgia [fired the first shots](#) in that war and Russia is not solely to blame. [Ongoing tensions](#) could well produce a [rematch](#), and Sarah Palin, reflecting the mood of many Americans, has said that the US should go to war with Russia if that occurs.⁷

The risks associated with the nuclear false alarms listed above would have been amplified if they had occurred during an international crisis, when there would have had a much greater chance of their being mistaken for the real thing. While more recent data would clearly be of interest, during 1977-84, “moderately serious false alarms,” known as Missile Display Conferences to

⁴ Robert M. Gates, *From the Shadows*, Simon & Schuster Paperbacks, New York, 2006, pp. 270-273.

⁵ Peter Vincent Pry, *War Scare*, Praeger, Westport, CT, 1999, page x, pp. 129-169.

⁶ Pry, *ibid*, pp. 183-238.

⁷ Laura Meckler, “Palin, on TV, Says U.S. Should Defend Its Allies,” *The Wall Street Journal*, September 12, 2008, page A6.

Evaluate Possible Threats, occurred almost [three times a week](#), indicating that the risk of such a coincidence is higher than might first be assumed.

Underestimation of the Risk

Society tends to underestimate the risk of a nuclear catastrophe, and especially the danger of a full-scale nuclear war, for several reasons. One significant barrier to seeing the true level of risk is that the dangerous states of Figure 1 are visited infrequently and for very short periods of time. Most people understandably base their perceptions on the typical environment that they face, but here the unusual, atypical environments dominate the risk. The thirteen days of the Cuban Missile Crisis spanned less than 0.1% of the nuclear deterrence era, yet probably encompassed between 10% and 30% of the total risk. The fact that most people are unaware of the majority of the risks listed above – as well as others that were not included – exacerbates the human tendency to overlook atypical environments. Unrecognized risks are overlooked by definition.

Another factor that causes society to underestimate the risk of a full-scale nuclear war is the belief that, because deterrence has worked for over fifty years, it will work into the indefinite future, without fail. In October 2009, soon after President Obama was awarded the Nobel Peace Prize for his commitment to “seek the peace and security of a world without nuclear weapons,” [TIME Magazine](#) ran a story entitled “Want Peace? Give a Nuke the Nobel,” that said in part:

As long as a nukeless world remains wishful thinking and pastoral rhetoric, we'll be all right. But if the Nobel Committee truly cares about peace, its members will think a little harder about trying to make it a reality. ... A world with nuclear weapons in it is a scary, scary place to think about. ... If the Nobel Committee ever wants to honor the force that has done the most over the past 60 years to end industrial-scale war, its members will award a Peace Prize to the bomb.

While TIME is right that eliminating nuclear weapons in the current world environment would entail major risks, that is irrelevant. If nuclear weapons ever are eliminated, it will first require major changes in the world. (Coincidentally, a [recent Russian article](#) makes exactly that point.) Today, Senate ratification of the new START Treaty is in serious question even though it would only reduce our nuclear arsenal from 2,200 to 1,550 warheads. Does TIME really think there is any risk of a president eliminating our nuclear weapons in the current atmosphere? And, even if a president tried to commit such a politically suicidal act, would Congress allow it? Obama's [Prague speech](#) included an important caveat that TIME overlooked:

So today, I state clearly and with conviction America's commitment to seek the peace and security of a world without nuclear weapons. I'm not naive. This goal will not be reached quickly -- perhaps not in my lifetime. It will take patience and persistence. But now we, too, must ignore the voices who tell us that the world cannot change. We have to insist, "Yes, we can." Make no mistake: As long as these weapons exist, the United States will maintain a safe, secure and effective arsenal to deter any adversary, and guarantee that defense to our allies -- including the Czech Republic.

Overlooking such caveats, as the TIME piece does, is dangerous because it creates the false impression that our only two choices are between business as usual and immediate nuclear disarmament. The latter straw man is easily demolished, mistakenly leading to the conclusion that nuclear weapons must be – and therefore, implicitly, can be – relied on to keep peace *ad infinitum*.

The mistaken belief that we must choose between immediate disarmament and doing nothing is often buttressed by another fallacy: Because starting a nuclear war would be suicide, no rational leader would do so. That is a questionable assumption for a number of reasons:

- In a confrontation between two nuclear powers over anything less than national survival, the first one to behave rationally loses. That is because it is irrational to risk national survival over lesser goals. Yet, there have been numerous such confrontations (e.g., Berlin, Cuba, Georgia).
- Only by pretending to be irrational enough to use our nuclear weapons and invite our own destruction can we preserve the primary value that they possess – deterring behavior we believe to be inimical to our interests. This paradox was spelled out in a 1995 US Strategic Command report, [*Essentials of Post-Cold War Deterrence*](#), obtained under the Freedom of Information Act:

... it hurts to portray ourselves as too fully rational and cool-headed. The fact that some elements may appear to be potentially “out of control” can be beneficial to creating and reinforcing fears and doubts within the minds of an adversary's decision makers. This essential sense of fear is the working force of deterrence. That the US may become irrational and vindictive if its vital interests are attacked should be part of the national persona we project to all adversaries.

Along those lines, in 1969, Richard Nixon tried to convince the Soviets and North Vietnamese that he was a [madman](#) with an itchy finger on the nuclear trigger. He hoped that this would end the Viet Nam War on terms more favorable to the United States.

- Just as most people have difficulty seeing the risk of a nuclear catastrophe because they cannot think more than one move out in the state diagram of Figure 1, national leaders often fail to see the consequences of their actions. In fact, that is how the most dangerous moves in that diagram have occurred. Examples include:

1. Describing an exchange during the 1961 Berlin crisis, Defense Secretary Robert McNamara relates:

I asked a senior NATO commander what further moves we should expect and how we should respond. He said the Soviets would probably do *a* and we *b*; they *c* and we *d*; they *e* and we *f*; and then we would be forced to do *g*. And when I said, “What do we do then?” he replied, “We should use nuclear weapons.” When I asked how he expected the Soviets to respond, he said, “With nuclear weapons.” In the event, of course, we did no such thing.

While, in this account, McNamara thought through the sequence of moves, it is disconcerting that a senior NATO commander did not. Similar lapses of judgment occurred repeatedly during 1962's Cuban Missile Crisis, though fortunately never being carried through to implementation.⁸

2. The 1961 Bay of Pigs fiasco created [strong pressure](#) within the U.S. to invade Cuba in force. In the month prior to the Cuban Missile Crisis, that pressure led the Soviets to warn "that any U.S. military action against Cuba would unleash nuclear war."⁹ Two days later (a month before the missiles were detected) that led Kennedy to warn the Soviets that "if Cuba should ever ... become an offensive military base of significant capacity for the Soviet Union, then this country will do whatever must be done to protect its own security and that of its allies."¹⁰ Once the missiles were discovered, both Kennedy and Khrushchev were boxed in by their earlier statements. The overt Soviet nuclear threat and the implied American one had been intended to deter certain behaviors. But deterrence failed at that level. Khrushchev did place missiles on Cuba that America viewed as offensive. (Khrushchev regarded them as a deterrent against a future American invasion, and therefore defensive in nature.) And, America seriously contemplated military action against Cuba. Fortunately, deterrence did not fail completely, in the sense that a nuclear war was averted.
 3. In a [2005 speech](#) in Tbilisi, President Bush proclaimed to the Georgian people: "The path of freedom you have chosen is not easy but you will not travel it alone. Americans respect your courageous choice for liberty. And as you build a free and democratic Georgia, the American people will stand with you." **Emboldened** by such promises and Bush's efforts to fast track Georgia's membership in NATO, in August 2008, Georgian President Mikheil Saakashvili attacked South Ossetia, which had seceded from Georgia after Georgia seceded from the Soviet Union. Fortunately, President Bush did not follow through on his promises, even though that meant losing face. Bush failed to think through the [likely consequences](#) of his actions, Saakashvili failed to do the same (he lost the war, and with it, any remaining hope of regaining the secessionist region). And, if Bush had kept his promises to Georgia, Russia would have suffered that same failure.
- During crises, rationality is often one of the first victims. [The Myth of Rationality in Situations of Crisis](#) examines how Kennedy and his advisers reached the irrational conclusion that the Bay of Pigs invasion could succeed against a Cuban adversary over 100 times stronger. [To Err is Human: Nuclear War by Mistake](#) has a section entitled *Performance during Crisis* which enumerates other impediments to rational behavior when it is most needed.

⁸ Robert McNamara: *Blundering Into Disaster: Surviving the First Century of the Nuclear Age*, Pantheon Books, New York, 1986, page 8.

⁹ Sorensen, *ibid*, page 680.

¹⁰ Sorensen, *ibid*, page 671.

- Alcohol and drugs can cause irrational behavior in otherwise rational people and there are at least four instances where world leaders either suffered from drug or alcohol impairment, or were at risk of that occurring:

President Kennedy was given amphetamines by Dr. Max Jacobson. Known as “Dr. Feelgood” and “Miracle Max” because of the massive amphetamine doses administered to his clients, Jacobson’s medical license was [revoked in 1975](#).

Some [reports](#) attributed Boris Yeltsin’s bizarre behavior to alcoholism. Whatever the cause, his behavior often seemed incompatible with the responsibilities of a world leader whose finger could be on the button.

George W. Bush and his wife have stated that his use of alcohol impaired their relationship prior to his becoming president and [allegations](#) of more serious problems exist. [Note: That link is to Wikipedia, which is not an authoritative source. However, its quote from David Owen’s book is unlikely to be faked, and Owen was Foreign Secretary. Again, that does not say he is accurate, but it adds some credibility.]

Former UK Prime Minister Tony Blair’s recent memoirs [raise questions](#) about his use of alcohol. While PM, he admits to often having a “stiff whisky or G and T before dinner, couple of glasses of wine or even half a bottle with it.” At a minimum, this would mean that he might have to make a decision involving the use of nuclear weapons when he was impaired enough that it would be illegal to drive a car.

These cases raise a more general question: If it is illegal to drive under the influence (DUI), shouldn’t it also be illegal to have one’s finger on the button under the influence (FOBUI)? If so, should a president have to abstain from alcohol since it is never known when he/she will have to make a fateful decision? I am not proposing that will ever happen, just that the world is at more risk than most realize.

- Mental illness can strike anyone, often with little or no warning. President Calvin Coolidge [suffered from depression](#) after his sixteen-year-old son died of blood poisoning. There were [reports](#) that, prior to President Nixon’s resignation as a result of the growing Watergate scandal, he “broached the possibility of suicide ... [seriously enough that White House Chief of Staff] Gen. Haig ordered doctors to take away Nixon’s tranquilizers and deny his requests for pills.” Soon after being ousted as Secretary of Defense, James Forrestal was hospitalized with a nervous breakdown and died in what appears to be a suicide.
- Some religious groups welcome chaos, including nuclear war, as ushering in an apocalyptic end to a sinful world. Of particular relevance to American nuclear policy is the belief by some Christians that certain Biblical prophecies – notably the Battle of Armageddon – are necessary precursors to the Second Coming of Christ. There is [evidence](#) that a number of prominent American political figures have been influenced by such thinking, though to what extent is an open question.