

## Almost Everything in “Dr. Strangelove” Was True

Posted in *The New Yorker* by [Eric Schlosser](#)

This month marks the fiftieth anniversary of Stanley Kubrick’s black comedy about nuclear weapons, “Dr. Strangelove or: How I Learned to Stop Worrying and Love the Bomb.” Released on January 29, 1964, the film caused a good deal of controversy. Its plot suggested that a mentally deranged American general could order a nuclear attack on the Soviet Union, without consulting the President. One reviewer described the film as “dangerous ... an evil thing about an evil thing.” Another compared it to Soviet propaganda. Although “Strangelove” was clearly a farce, with the comedian Peter Sellers playing three roles, it was criticized for being implausible. An expert at the Institute for Strategic Studies called the events in the film “impossible on a dozen counts.” A former Deputy Secretary of Defense dismissed the idea that someone could authorize the use of a nuclear weapon without the President’s approval: “Nothing, in fact, could be further from the truth.” ([See a compendium of clips from the film.](#)) When “Fail-Safe”—a Hollywood thriller with a similar plot, directed by Sidney Lumet—opened, later that year, it was criticized in much the same way. “The incidents in ‘Fail-Safe’ are deliberate lies!” General Curtis LeMay, the Air Force chief of staff, said. “Nothing like that could happen.” The first casualty of every war is the truth—and the Cold War was no exception to that dictum. Half a century after Kubrick’s mad general, Jack D. Ripper, launched a nuclear strike on the Soviets to defend the purity of “our precious bodily fluids” from Communist subversion, we now know that American officers did indeed have the ability to start a Third World War on their own. And despite the introduction of rigorous safeguards in the years since then, the risk of an accidental or unauthorized nuclear detonation hasn’t been completely eliminated.

The command and control of nuclear weapons has long been plagued by an “always/never” dilemma. The administrative and technological systems that are necessary to insure that nuclear weapons are always available for use in wartime may be quite different from those necessary to guarantee that such weapons can never be used, without proper authorization, in peacetime. During the nineteen-fifties and sixties, the “always” in American war planning was given far greater precedence than the “never.” Through two terms in office, beginning in 1953, President Dwight D. Eisenhower struggled with this dilemma. He wanted to retain Presidential control of nuclear weapons while defending America and its allies from attack. But, in a crisis, those two goals might prove contradictory, raising all sorts of difficult questions. What if Soviet bombers were en route to the United States but the President somehow couldn’t be reached? What if Soviet tanks were rolling into West Germany but a communications breakdown prevented NATO officers from contacting the White House? What if the President were killed during a surprise attack on Washington, D.C., along with the rest of the nation’s civilian leadership? Who would order a nuclear retaliation then?

With great reluctance, Eisenhower agreed to let American officers use their nuclear weapons, in an emergency, if there were no time or no means to contact the President. Air Force pilots were allowed to fire their nuclear anti-aircraft rockets to shoot down Soviet bombers heading toward the United States. And about half a dozen high-level American commanders were allowed to use far more powerful nuclear weapons, without contacting the White House first, when their forces were under attack and “the urgency of time and circumstances clearly does not permit a specific decision by the President, or other person empowered to act in his stead.” Eisenhower worried that providing that sort of authorization in advance could make it possible for someone to do “something foolish down the chain of command” and start an all-out nuclear war. But the alternative—allowing an attack on the United States to go unanswered or NATO forces to be overrun—seemed a lot worse. Aware that his decision might create public unease about who really controlled America’s nuclear arsenal, Eisenhower insisted that his delegation of Presidential authority be kept secret. At a meeting with the Joint Chiefs of Staff, he confessed to being “very fearful of having written papers on this matter.”

President John F. Kennedy was surprised to learn, just a few weeks after taking office, about this secret delegation of power. “A subordinate commander faced with a substantial military action,” Kennedy was told in a top-secret memo, “could start the thermonuclear holocaust on his own initiative if he could not reach you.” Kennedy and his national-security advisers were shocked not only by the wide latitude given to American officers but also by the loose custody of the roughly three thousand American nuclear weapons stored in Europe. Few of the weapons had locks on them. Anyone who got hold of them could detonate them. And there was little to prevent NATO officers from Turkey, Holland, Italy, Great Britain, and Germany from using them without the approval of the United States.

In December, 1960, fifteen members of Congress serving on the Joint Committee on Atomic Energy had toured NATO bases to investigate how American nuclear weapons were being deployed. They found that the weapons—some of them about a hundred times more powerful than the bomb that destroyed Hiroshima—were routinely guarded, transported, and handled by foreign military personnel. American control of the weapons was practically nonexistent. Harold Agnew, a Los Alamos physicist who accompanied the group, was especially concerned to see German pilots sitting in German planes that were decorated with Iron Crosses—and carrying American atomic bombs. Agnew, in his own words, “nearly wet his pants” when he realized that a lone American sentry with a rifle was all that prevented someone from taking off in one of those planes and bombing the Soviet Union.

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The Kennedy Administration soon decided to put locking devices inside NATO’s nuclear weapons. The coded electromechanical switches, known as “permissive action links” (PALs), would be placed on the arming lines. The weapons would be inoperable without the proper code—and that code would be shared with NATO allies only when the White House was prepared to fight the Soviets. The American military didn’t like the idea of these coded switches, fearing that mechanical devices installed to improve weapon safety would diminish weapon reliability. A top-secret State Department memo summarized the view of the Joint Chiefs of Staff in 1961: “all is well with the atomic stockpile program and there is no need for any changes.”

After a crash program to develop the new control technology, during the mid-nineteen-sixties, permissive action links were finally placed inside most of the nuclear weapons deployed by NATO forces. But Kennedy’s directive applied only to the NATO arsenal. For years, the Air Force and the Navy blocked attempts to add coded switches to the weapons solely in their custody. During a national emergency, they argued, the consequences of not receiving the proper code from the White House might be disastrous. And locked weapons might play into the hands of Communist saboteurs. “The very existence of the lock capability,” a top Air Force general claimed, “would create a fail-disable potential for knowledgeable agents to ‘dud’ the entire Minuteman [missile] force.” The Joint Chiefs thought that strict military discipline was the best safeguard against an unauthorized nuclear strike. A two-man rule was instituted to make it more difficult for someone to use a nuclear weapon without permission. And a new screening program, the Human Reliability Program, was created to stop people with emotional, psychological, and substance-abuse problems from gaining access to nuclear weapons.

Despite public assurances that everything was fully under control, in the winter of 1964, while “Dr. Strangelove” was playing in theatres and being condemned as Soviet propaganda, there was nothing to prevent an American bomber crew or missile launch crew from using their weapons against the Soviets. Kubrick had researched the subject for years, consulted experts, and worked closely with a former R.A.F. pilot, Peter George, on the screenplay of the film. George’s novel about the risk of accidental nuclear war, “Red Alert,” was the source for most of “Strangelove”’s plot. Unbeknownst to both Kubrick and George, a top official at the Department of Defense had already sent a copy of “Red Alert” to every member of the Pentagon’s Scientific Advisory Committee for Ballistic Missiles. At the Pentagon, the book was taken seriously as a cautionary tale about what might go wrong. Even Secretary of Defense Robert S. McNamara privately worried that an accident, a mistake, or a rogue American officer could start a nuclear war.

Coded switches to prevent the unauthorized use of nuclear weapons were finally added to the control systems of American missiles and bombers in the early nineteen-seventies. The Air Force was not pleased, and considered the new security measures to be an insult, a lack of confidence in its personnel. Although the Air Force now denies this claim, according to more than one source I contacted, the code necessary to launch a missile was set to be the same at every Minuteman site: 00000000.

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The early permissive action links were rudimentary. Placed in NATO weapons during the nineteen-sixties and known as Category A PALs, the switches relied on a split four-digit code, with ten thousand possible combinations. If the United States went to war, two people would be necessary to unlock a nuclear weapon, each of them provided with half the code. Category A PALs were useful mainly to delay unauthorized use, to buy time after a weapon had been taken or to thwart an individual psychotic hoping to cause a large explosion. A skilled technician could open a stolen weapon and unlock it within a few hours. Today’s Category D PALs, installed in the Air Force’s hydrogen bombs, are more sophisticated. They

require a six-digit code, with a million possible combinations, and have a limited-try feature that disables a weapon when the wrong code is repeatedly entered.

The Air Force's land-based Minuteman III missiles and the Navy's submarine-based Trident II missiles now require an eight-digit code—which is no longer 00000000—in order to be launched. The Minuteman crews receive the code via underground cables or an aboveground radio antenna. Sending the launch code to submarines deep underwater presents a greater challenge. Trident submarines contain two safes. One holds the keys necessary to launch a missile; the other holds the combination to the safe with the keys; and the combination to the safe holding the combination must be transmitted to the sub by very-low-frequency or extremely-low-frequency radio. In a pinch, if Washington, D.C., has been destroyed and the launch code doesn't arrive, the sub's crew can open the safes with a blowtorch.

The security measures now used to control America's nuclear weapons are a vast improvement over those of 1964. But, like all human endeavors, they are inherently flawed. The Department of Defense's Personnel Reliability Program is supposed to keep people with serious emotional or psychological issues away from nuclear weapons—and yet two of the nation's top nuclear commanders were recently removed from their posts. Neither appears to be the sort of calm, stable person you want with a finger on the button. In fact, their misbehavior seems straight out of "Strangelove."

Vice Admiral Tim Giardina, the second-highest-ranking officer at the U.S. Strategic Command—the organization responsible for all of America's nuclear forces—was investigated last summer for allegedly using counterfeit gambling chips at the Horseshoe Casino in Council Bluffs, Iowa. According to the Iowa Division of Criminal Investigation, "a significant monetary amount" of counterfeit chips was involved. Giardina was relieved of his command on October 3, 2013. A few days later, Major General Michael Carey, the Air Force commander in charge of America's intercontinental ballistic missiles, was fired for conduct "unbecoming an officer and a gentleman." According to a report by the Inspector General of the Air Force, Carey had consumed too much alcohol during an official trip to Russia, behaved rudely toward Russian officers, spent time with "suspect" young foreign women in Moscow, loudly discussed sensitive information in a public hotel lounge there, and drunkenly pleaded to get onstage and sing with a Beatles cover band at La Cantina, a Mexican restaurant near Red Square. Despite his requests, the band wouldn't let Carey onstage to sing or to play the guitar.

While drinking beer in the executive lounge at Moscow's Marriott Aurora during that visit, General Carey made an admission with serious public-policy implications. He off-handedly told a delegation of U.S. national-security officials that his missile-launch officers have the "worst morale in the Air Force." Recent events suggest that may be true. In the spring of 2013, nineteen launch officers at Minot Air Force base in North Dakota were decertified for violating safety rules and poor discipline. In August, 2013, the entire missile wing at Malmstrom Air Force base in Montana failed its safety inspection. Last week, the Air Force revealed that thirty-four launch officers at Malmstrom had been decertified for cheating on proficiency exams—and that at least three launch officers are being investigated for illegal drug use. The findings of a report by the RAND Corporation, leaked to the A.P., were equally disturbing. The study found that the rates of spousal abuse and court martials among Air Force personnel with nuclear responsibilities are much higher than those among people with other jobs in the Air Force. "We don't care if things go properly," a launch officer told RAND. "We just don't want to get in trouble."

The most unlikely and absurd plot element in "Strangelove" is the existence of a Soviet "Doomsday Machine." The device would trigger itself, automatically, if the Soviet Union were attacked with nuclear weapons. It was meant to be the ultimate deterrent, a threat to destroy the world in order to prevent an American nuclear strike. But the failure of the Soviets to tell the United States about the contraption defeats its purpose and, at the end of the film, inadvertently causes a nuclear Armageddon. "The whole point of the Doomsday Machine is lost," Dr. Strangelove, the President's science adviser, explains to the Soviet Ambassador, *"if you keep it a secret!"*

A decade after the release of "Strangelove," the Soviet Union began work on the Perimeter system—a network of sensors and computers that could allow junior military officials to launch missiles without oversight from the Soviet leadership. Perhaps nobody at the Kremlin had seen the film. Completed in 1985, the system was known as the Dead Hand. Once it was activated, Perimeter would order the launch of long-range missiles at the United States if it detected nuclear detonations on Soviet soil and Soviet leaders couldn't be reached. Like the Doomsday Machine in "Strangelove," Perimeter was kept secret from the United States; its existence was not revealed until years after the Cold War ended.

In retrospect, Kubrick's black comedy provided a far more accurate description of the dangers inherent in nuclear command-and-control systems than the ones that the American people got from the White House, the Pentagon, and the mainstream media.

"This is absolute madness, Ambassador," President Merkin Muffley says in the film, after being told about the Soviets' automated retaliatory system. "Why should you build such a thing?" Fifty years later, that question remains unanswered, and "Strangelove" seems all the more brilliant, bleak, and terrifyingly on the mark.

*You can read Eric Schlosser's [guide to the long-secret documents](#) that help explain the risks America took with its nuclear arsenal, and watch and read his [deconstruction of clips from "Dr. Strangelove"](#) and [from a little-seen film](#) about permissive action links.*