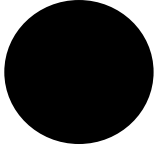


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## The Process of Zero

*Jonathan Granoff*

History never stands still. The existence of nuclear weapons amplifies our responsibility to determine its direction. As the first generation burdened with the conscious choice of whether to be the last, our decisions must be coherent, practical, and clear. There is no margin of error when dealing with devices with destructive magnitudes that overwhelm imagination. Most post-Cold War analysis focuses on the dangers of untrustworthy states or sub-state actors, such as terrorists, acquiring nuclear weapons. Certainly these are unacceptable risks. Yet it is also the existential reality of the weapons themselves coupled with the probabilities of human, computer, or mechanical error that continually keeps humanity's future uncertain.

President Barack Obama and UN Secretary-General Ban Ki-Moon have raised the elimination of these threats as an international purpose to a level of prominence not seen since Presidents Reagan and Gorbachev met in Reykjavik, Iceland, in December 1987. Secretary-General Ban called achieving total nuclear disarmament a "global good of the highest order," and on October 24, 2008, set forth a bold five-point agenda for progress. In addition to advancing a convention that would ban the use of nuclear weapons and lead to their

elimination, he called for a Security Council summit on nuclear issues. On September 24, 2009, two firsts demonstrated this new political will: the first Security Council summit devoted to nuclear disarmament and nonproliferation, and the first time any session of the Security Council was chaired by a U.S. president.

Convening such an historic event under President Obama's chairmanship put to rest any doubts about his intention to ensure "America's commitment to seek the peace and security of a world without nuclear weapons." This new compass point of "zero," which the president set forth so forcefully in his historic speech in April 2009 in Prague, must be understood as a process and not just the pursuit of an event. The process itself must have a rational foundation and must build a new international political and social architecture that itself makes us more secure.

Arguments by analysts that pose far-fetched hypotheses, such as the United States giving up its last nuclear warhead while risking Russia or North Korea having a few hidden away, are such blatant distortions of any real negotiating agenda as to make one wonder whether such prognosticators are operating without knowledge of the actual debates among nations. The real

negotiating state of play runs instead to obtaining a cut-off of fissile materials, strengthening international inspection safeguards, making cutbacks of arsenals transparent and irreversible, preventing nations from breaking out of the nonproliferation regime, and expanding nuclear weapons-free zones. These security-enhancing efforts are manifestly practical. They are also part of the process of zero.

### *Oops! The Real Threat*

Some experts say the risk these weapons pose is serious but it is outweighed by their deterrent value. They argue that the Cold War did not become a hot war because the weapons restrained a more blatant pursuit of power. A fair point; but now that the Cold War is over, why does the risk remain? An often overlooked danger is not just a hostile state or a terrorist getting a bomb, but the consequences of a simple mistake.

There are over 23,000 nuclear weapons still in existence, with 95 percent in the hands of Russia and the United States. Several thousand of these remain on high-alert launch status, as if the Cold War had not ended. Many yield more than 70 times the destructive horror of the bomb that leveled Hiroshima. The most common size, 150 kilotons, is ten times the capacity of that device. If one of these were to explode in Mumbai, it would incinerate over seven million people. A few dozen exploding in Russia and the United States would end these nations as habitable places for a millennium, cause immeasurable suffering, global climatic changes, mass starvation, and a breakdown of civilization as we know it.

Gen. George Lee Butler, commander of U.S. strategic nuclear forces during the 1990s (with day-to-day responsibility for operations, discipline, training of tens of thousands of crew members, the systems that they operated and the warheads those

systems were designed to deliver) perhaps has better knowledge of the near-misses and follies of the U.S. nuclear program than any other person. He has delved deeply into the history of the incidents and accidents of the nuclear age as recorded by the United States and the Soviet Union, and concluded, "it is more chilling than anything you can imagine." He notes a litany of near catastrophes:

missiles that blew up in their silos and ejected their nuclear warheads outside of the confines of the silo; B-52 aircraft that collided with tankers and scattered nuclear weapons across the coast and into the offshore seas of Spain; a B-52 bomber with nuclear weapons aboard that crashed in North Carolina, and on investigation it was discovered that on one of those weapons, six of the seven safety devices that prevent a nuclear explosion had failed as a result of the crash. There are dozens of such incidents. Nuclear missile-laden submarines that experienced catastrophic accidents and now lie at the bottom of the ocean.

There are other examples that have not received adequate public exposure. At 3 AM on November 9, 1979, computers at three U.S. military command centers simultaneously picked up over 200 missiles from the Soviet Union headed for the United States. Officials at the Pentagon's National Military Command Center, the Alternate Military Command Center in Fort Richie, Maryland, and the American Aerospace Defense Command in Cheyenne Mountain in Colorado Springs had only minutes to assess what appeared to be a massive, first-strike nuclear attack. Minutemen missile launch control centers in the Midwest were readied and expected the worst. As national security



advisor Zbigniew Brzezinski prepared to call President Carter, the threat was reassessed at 2,200 missiles, enough to end the United States, and by fallout and nuclear winter, perhaps the entirety of civilization. But just before Brzezinski picked up the phone, he was informed that the satellites designed to detect launches and early warning radar systems indicated that there was no missile attack at all. What had happened? Senator Charles Percy was touring a defense facility and officers wanted to impress upon him the seriousness of their mission. One of the technicians had mistakenly put a training tape into the wrong computer. In the predawn of November 9, 1979, the world's fate hung in the balance of but a few people and a few minutes.

On June 3, 1980, U.S. command posts again indicated a Soviet attack, and again launch crews for Minuteman missiles were given preliminary launch warnings and bomber aircraft manned. Computer displays showed two missiles attacking, then none, and then 200. A simple computer chip had malfunctioned.

And while U.S. nuclear near-misses might be underreported, we know only a fraction of the errors that occurred in the silos and command posts of our one-time adversary. On September 26, 1983, the Soviet Union's launch detection satellites reported that U.S. Minuteman intercontinental missiles had been launched. Lt. Col. Stanislav Petrov, however, concluded that his satellites had malfunctioned and, on his own authority, prevented a Soviet alert. On January 25, 1995, the Russians mistook a weather satellite for a nuclear weapon launch from a submarine off the coast of Norway. President Yeltsin said the next day that he had activated his "nuclear football"—a device that allows the Russian president to communicate with his top military advisors and review the crisis in real time.

Recent mishaps should cause continuing concern. For example, on August 30, 2007, a U.S. B-52 bomber was mistakenly armed with six nuclear warheads and flown for more than three hours across several states. On October 19, 2007, the Department of

Defense and Air Force released a report that concluded handling standards and procedures had not been followed. Subsequently, four commanders were relieved of their commands, numerous personnel were disciplined, and, in the wake of this and other incidents, Secretary of the Air Force Michael Wynne and Chief of Staff of the Air Force General T. Michael Moseley resigned.

Such incidents are not unique to the United States. On February 3, 2009, the *Vanguard*, a British Royal Navy nuclear submarine, and *Le Triomphant*, a French nuclear vessel, collided in the Atlantic Ocean. Both carried nuclear warheads and were on routine patrol. Defense officials said they were “unable to see each other.”

Even under the best of circumstances, amid good relations between countries, mistakes can be made—especially given the limited time allowed to discern fact from fiction. As President Reagan admitted: “Six minutes to decide how to respond to a blip on a radar scope and decide whether to unleash Armageddon! How could anyone apply reason at a time like that?”

The Cuban Missile Crisis, perhaps the closest we’ve come to an all-out nuclear exchange, was resolved in 13 days. But how much time is there in a crisis between India and Pakistan, a computer hacker creating an illusion of attack, or a terrorist posing as a state actor? It is simply not realistic to believe that, by accident or design, a nuclear weapon will never be used. Simply put, there is no greater threat to our security than that posed by the weapons themselves. Moreover, a powerful stimulant to their proliferation is the continued assertion of their unique value in the hands of the nine states that deploy them—especially, the United States, France, China, Russia, and Britain, the five permanent members of the Security Council and identified as Nuclear Weapons States (NWS) under the Nuclear Non-Proliferation Treaty (NPT). Add to this

list three other states that never signed the NPT—India, Pakistan, and Israel—as well as North Korea, which opted out of the treaty, and it only heightens the frightening prospect of the possible use of nuclear weapons.

As these latter nations and current nuclear aspirants have argued, the existing system that keeps proliferation in check is inequitable, discriminatory, and thus unstable. It is as if the Biological Weapons Convention said that no countries could use smallpox or polio as a weapon but nine countries can use the plague as a weapon since they are so morally and politically responsible. Such incoherence would be patently unacceptable, and its inequity would breed contempt for the regime. Is such incoherence with respect to nuclear weapons any less destabilizing?

### *Legitimizing Abolition*

If we conclude that nuclear weapons are more of a hazard than any problem they seek to solve and that the tools of law, diplomacy, and moral and practical persuasion must be invoked to achieve their stricter international control and elimination, we will find ourselves taking a very mainstream position. After all, nearly 190 countries are parties to the NPT, in which they agreed in 2000 to “an unequivocal undertaking by the Nuclear Weapons States to accomplish the total elimination of their nuclear arsenals leading to nuclear disarmament to which all states are committed.” Then there is the unanimous opinion of the International Court of Justice, the world’s highest tribunal in international law, which responded to a query by the UN General Assembly as to the legality of nuclear weapons. Every judge held that “there exists an obligation to pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects under strict and effective international con-

trols.” Finally, there is the intent of the U.S.-sponsored Security Council resolution of September 24, 2009, that commits all nations “to seek a safer world for all and to create the conditions for a world without nuclear weapons, in accordance with the goals of the NPT, in a way that promotes international stability.”

Supporters of perpetual deterrence in a world replete with nukes ignore the realities of all these international commitments and continue to paint disarmament advocates as naïve idealists. Nevertheless, a rising chorus of prominent world leaders has identified the verifiable and enforceable abolition of nuclear weapons as the best way to address the unacceptable risk. This group of advocates includes such seasoned realists as George Schultz, Sam Nunn, Henry Kissinger, and William Perry, who in January 2007, and again a year later, penned strong statements affirming the imperative of moving toward a nuclear weapons-free world. They have found general support from Madeline Albright, Richard V. Allen, James Baker III, Warren Christopher, Robert McFarlane, Zbigniew Brzezinski, Colin Powell, and many others. Former presidents, chancellors, foreign ministers, and leading political figures from Germany, Italy, Australia, England, and Poland have joined this chorus. Implicit in all these statements is the fact that failure to make credible disarmament progress will continue to stimulate proliferation and sustain unacceptable risks.

### *Critics of the Process of Zero*

Yet some officials and analysts still staunchly argue that pursuing a path to zero would only stimulate proliferation. In October 2008, Secretary of Defense Robert Gates criticized proposals for the elimination of

nuclear weapons, emphasizing that we must maintain levels of nuclear weapons sufficient to “reassure over two dozen allies and partners who rely on our nuclear umbrella for their security, making it unnecessary for them to develop their own.” Likewise, in an August 3, 2009, *Wall Street Journal* op-ed, Douglas Feith, former undersecretary of defense for policy under President George W. Bush, and Abram Shulsky, a former U.S.

“Prominent world leaders have identified verifiable and enforceable abolition as the best way to address the unacceptable risk.”

government intelligence analyst, argued that if the United States fails to modernize its arsenal of nuclear weapons, its friends and allies would lose confidence in the nuclear umbrella of extended deterrence and thus become nuclear weapons states themselves. They argued that this would cause a “tipping point, with cascading nuclear proliferation,” and criticized newly proposed weapons reductions by Moscow and Washington.

In short, they suggested that friends and allies, for whom the United States is willing to expend the blood of its soldiers and vast sums from its treasury, would disown their nonproliferation obligations, invest billions of their own dollars, and seek to become nuclear powers simply in response to nuclear weapons states fulfilling their NPT disarmament obligations. But exactly which countries would do this? Do “two dozen” of our allies feel imminently threatened by nuclear weapons? Are they not sufficiently protected by conventional weapons? Moreover, existing nuclear powers will not countenance proliferation outbreaks as they walk together toward elimination.

Facts do not seem to deter those who make arguments extolling the value of an ever-expanding extended nuclear deterrence umbrella. For example, they ignore Germany's foreign minister, Guido Westerwelle, who called for the withdrawal of all North Atlantic Treaty Organization (NATO) nuclear weapons from German soil within four years. Westerwelle has described these weapons as "a relic of the Cold War [that does] not increase our security," and has argued that by eliminating all nuclear weapons from Germany, the country would "set a good example when it comes to disarmament." Japanese Prime Minister Yukio Hatoyama, in praising President Obama's global disarmament initiative, went further by suggesting that Washington forswear the use of nuclear weapons except in response to a nuclear attack. Such a "no first use" posture would dramatically lower the role of the weapons in military planning. Indeed, rather than pushing our allies toward developing nuclear weapons of their own, these examples demonstrate that U.S.-led disarmament efforts will stimulate moves in kind.

With respect to deterrence against non-nuclear attacks, former Defense Secretary William Perry said in April 1996, "if some nation were to attack the United States with chemical weapons...we could make a devastating response without the use of nuclear weapons." Perry noted, "in every situation that I have seen so far, nuclear weapons would not be required for response." Would that same logic not apply to threats against our allies? Though the post-9/11 world presents different challenges, that underlying calculus has not changed.

The final and most blatant straw-man argument asserts that disarmament advocates would rely on the trustworthiness of countries to live up to their promises without adequate verification. But no serious disarmament proposal fails to include

iron-clad verification and monitoring systems to prevent proliferation or cheating. Moreover, no one is suggesting that actual disarmament toward a world free of nuclear weapons could begin without a robust inspection and enforcement system in place. In other words, even the pursuit of zero first requires changing our relationships and building trust, confidence, and verification.

### *The Paths and Their Obstacles*

At the NPT review conference in 2000, all 187 parties to the treaty agreed on 13 practical steps to fulfill disarmament obligations. These commitments constitute part of the process of zero and are also the standard against which progress will be measured at a follow-up review in 2010. These measures include, but are not limited to, bringing the Comprehensive Nuclear Test-Ban Treaty into force; negotiating a treaty halting the production of fissile materials for weapons purposes; and implementing and concluding another stage of the Strategic Arms Reduction Treaty (START) process. Another parallel route to strengthen the disarmament regime would include India, Pakistan, Israel, and North Korea in pursuing a universal, verifiable treaty for the global elimination of nuclear weapons. Supporters of this route include the vast majority of countries in the world—among them China and India, which by themselves account for more than one-third of the world's population.

Russia and the United States have publicly declared a shared aspiration to obtain a nuclear weapons-free world, and China and the United States have become economically interdependent and thus share core security interests. It is therefore legitimate to ask: what, exactly, is holding up progress? Why do the negotiations between Russia and the United States contemplate the indefinite retention of arsenals in excess of 1,000 warheads each—arsenals that will continue to threaten the very existence of civilization?

And why is there a push to “modernize” rather than simply eliminate these systems in the United States and other nuclear weapons nations?

Many Russian military planners are concerned that diminishing reliance on its nuclear arsenal creates the risk of strategic weakness. They point to Washington’s withdrawal from the Anti-Ballistic Missile Treaty, its reluctance to support the prevention of the weaponization of space, the expansion of NATO, and the presence of American troops on more than 700 foreign military bases in more than 130 countries. They further point to expressions of force projection such as the Pentagon’s call for “full-spectrum dominance” set forth in the Joint Vision 2020 document, as well as the enormous U.S. conventional military budget.

Many American military planners believe that nuclear weapons remain central to our NATO alliances, keeping our friends and allies supportive and non-nuclear, while acting as a reliable, final arbiter of power and stability in a dangerous world. It has not come cheaply. The Brookings Institution’s *Atomic Audit* reports that the United States alone has spent over \$5.5 trillion on its nuclear arsenal since its inception. And the Pentagon wants to keep the tap open.

Secretary of Defense Robert Gates has argued that the reliability and predictability of the nuclear arsenal is diminishing and therefore a modernization program is needed. While we might need steps to make sure the arsenal is safe and that its stewardship is adequate, ensuring that deployment of these weapons is 100 percent predictable is of little value. An “unreliable” warhead, in technical terms, does not mean that it is a dud—only that its expected yield is 90 percent or less than its original design. The

notion that, say, an 87 percent yield predictability would fundamentally diminish the deterrent effect of the thousands of nuclear weapons remaining in America’s arsenal—as many have argued—is absurd. A typical U.S. warhead has a yield roughly ten times the destructive force of the bomb dropped on Hiroshima. And with more than 9,000 warheads in the U.S. nuclear arsenal,

“Washington robustly funds its nuclear program, encouraging others to see them as valuable.”

even if each bomb were to have a slightly diminished capacity for destruction, there’s far more than enough to go around.

As Washington continues to robustly fund its nuclear program (presently in excess of \$50 billion a year) it inherently increases the perceived value of these devices, thus encouraging others to see them as valuable and making the road to zero that much more difficult. Thus, the U.S. posture should unambiguously assure all countries renouncing nuclear weapons that they will not be threatened with them. It should also reject the Cold War doctrine of “counterforce,” which requires readiness to execute a comprehensive nuclear attack against an enemy’s total nuclear capabilities. This strategy—which requires keeping nuclear forces on a quick-launch status ready to inflict a preemptive strike, thus increasing the likelihood of use in a crisis—is still embraced by the Pentagon.

Worse, the 2002 Nuclear Posture Review has given the U.S. arsenal an overly broad mission, requiring it to be at the ready for use against “unexpected contingencies” and “surprising military developments.” Based on this open-ended doctrine, Gen. Kevin P. Chilton, head of the U.S.

Strategic Command, which is charged with administration of the nuclear arsenal, recently suggested that we not “take any response options off the table from an attack on the United States of America” and that we could even use nuclear weapons in response to a cyber attack. Deterrence is one thing, but the notion of strategic doctrine reserving the right to loose a nuclear weapon against what could turn out to be a cadre of teenage computer hackers is almost laughable.

There is a contradiction, however, inherent in such a military posture. One cannot simultaneously affirm the currency and status of nuclear weapons and effectively argue that other nations—possessing fewer conventional weapons and living in dangerous neighborhoods such as the Middle East or Northeast Asia—would not find value in having a nuclear deterrent. Outside of the strict legal duties of the NPT, what basis do we have to tell Iran that nuclear weapons are abhorrent? Only by pursuing U.S. disarmament can Washington stop undercutting the moral and practical legitimacy of nonproliferation efforts around the world.

### *A Consistent Approach*

The threat-reducing commitments made under the NPT must be achieved in a manner that reinforces global disarmament. Even these modest efforts will bolster the nonproliferation regime, but only if they are part of a larger process toward zero that encompasses other agreements such as the Comprehensive Nuclear Test-Ban Treaty, which is designed to inhibit a nuclear arms race and restrict additional states seeking to obtain deliverable nuclear warheads. In the United States, however, powerful lobbies are attempting to tie Senate ratification of this treaty to additional funding to modify or design new warheads and production facilities—all under the guise of maintaining a reliable arsenal. Such efforts run

counter to the process of downgrading the status of the weapons and will only speed proliferation. But an approach consistent with Washington’s international obligations and the preference for diplomacy over force under the Obama administration should mandate a dramatically diminished role for nuclear weapons and raise the operational hurdle of any use. Maintaining a sense of moral taboo regarding these devices is absolutely necessary. If they are extolled as legitimate expressions of sovereign power, the likelihood of their use and spread increases.

Nuclear apartheid, with haves and have-nots in two tiers, is an affront to the collective cooperative security the world requires to address our shared threats effectively. First steps toward remedying this untenable situation are essential. Rapidly reducing the U.S. and Russian arsenals to levels low enough to bring all nuclear weapons states into serious negotiations is imperative. The cuts contemplated under START negotiations (which would slash nuclear weapons to levels approaching 1,500 on each side) require our strongest support. Doctrines and policies that present barriers to this process must be rejected. Progress on the vision of nuclear disarmament—as affirmed by the Security Council, President Obama, the UN secretary-general and all 189 countries in the NPT—brings with it the possibility of commencing deliberations and negotiations on a universal convention or framework of legal instruments for a sustainable, verifiable, and enforceable global elimination of nuclear weapons.

The alternative—massive proliferation—is frightening. A world with dozens of nuclear weapons states and aspirants will turn regional tensions into international crises, dramatically increasing the likelihood of a catastrophic mistake or a nuclear device falling into the hands of a sub-state actor. Increased desires by additional countries to acquire such weapons will place critical



strains on the nonproliferation regime and its core instrument, the NPT. Efforts to add new and necessary inspection capacities to the International Atomic Energy Agency will fail. The status quo will simply not hold.

At a much more basic level, however, one must question whether it is incompatible for an advanced democracy such as the United States to ever—under any circumstances—again use a nuclear weapon. There is little argument that it would violate the most basic principles of international humanitarian law prohibiting indiscriminate killing of civilians, unnecessary or disproportionate suffering, extensive environmental damage, and injury to neutral states and future generations.

Indeed, the Nobel Peace Laureates said in their 2006 Rome Declaration: “The use of a nuclear weapon against a state without nuclear weapons is patently immoral. Use against a state with nuclear weapons is also suicidal. These weapons have no value against terrorists or criminals. Progress toward a safer future is not thwarted from a lack of practical, threat reducing policy options. The problem is lack of political will.”

President Obama took this one step further in his address to the UN General Assembly on September 23, 2009. Old habits and arguments, he said, simply build up walls between us and the future our people seek. He placed nuclear nonproliferation and disarmament in the context of other global

challenges requiring new levels of cooperation: the promotion of peace and security, the preservation of our planet, and a global economy that advances opportunity for all people. As he concluded: “In an era when our destiny is shared, power is no longer a zero-sum game. No one nation can or should try to dominate another nation. No world order that elevates one nation or

“Nuclear apartheid, with haves and have-nots in two tiers, is an affront to the collective cooperative security the world requires.”

group of people over another will succeed. No balance of power among nations will hold. The traditional divisions between nations of the South and the North make no sense in an interconnected world; nor do alignments of nations rooted in the cleavages of a long-gone Cold War.”

The process of moving toward zero will establish new relations among nations, promoting greater transparency, trust, and shared interests. We have become so used to cynicism that it is refreshing to feel a surge of enthusiasm when the U.S. president sincerely calls for advancing our common global interests. He is correct to summon us to work together to build bridges among the nations of the world and to a more secure future. He is giving us an opportunity to affirm that which is magnificent and precious: protecting our shared humanity. ●